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OCTOBER TWENTIETH NINETEEN HUNDRED SIXTEEN



IOWA DAY

FOR

The Public Schools of the State

ISSUED BY THE

Jowa, DEPARTMENT OF PUBLIC INSTRUCTION

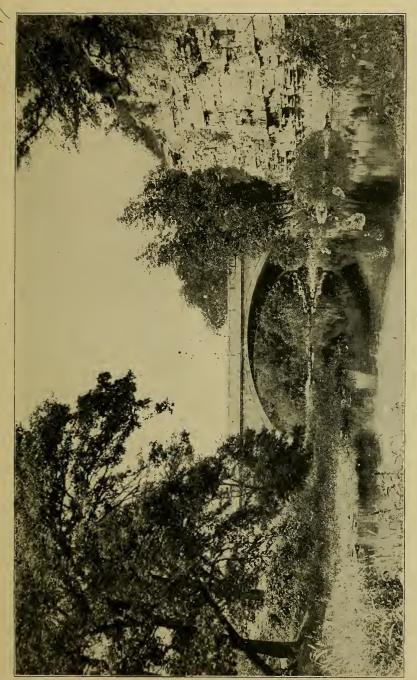
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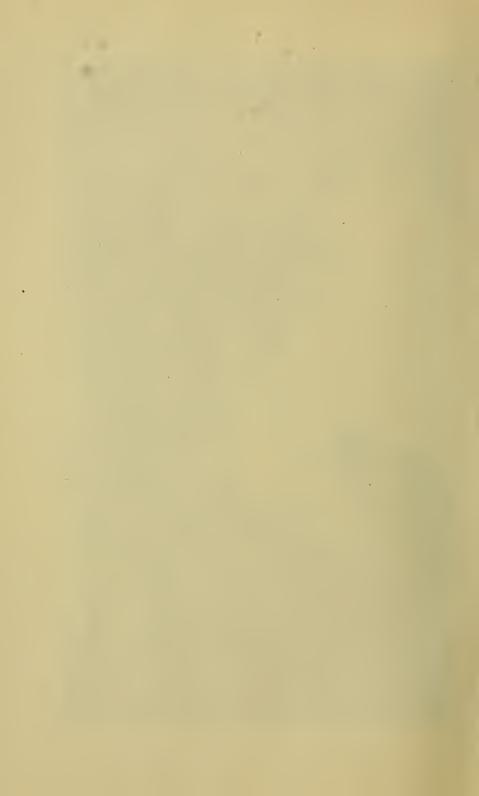
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State Street Bridge at Mason City.



FOREWORD.

The Department of Public Instruction recommends that Friday, October 20th, 1916, be observed in all the public schools of the state as IOWA DAY. All institutions of learning and education, all civic, commercial, and farmers' clubs, and all business organizations are invited to participate in exercises befitting the occasion. On this day, the home, the school, the church, the press, and the many splendid industries may join hands in appreciation of the achievements and advantages of a great state.

A better knowledge of the wealth, resources, and possibilities of our state should become a matter of general information among our people. There are no impoverished areas within our borders. Prosperity is everywhere in evidence. Therefore, Iowa can afford the best homes, the best churches, the best schools and the best colleges in the world. The development of public improvements should correspond with the rapid increase of our wealth, the improvement of our homes, and the growth of our industries.

Let no spirit of mere boasting or selfishness be manifest but with charity for others, let us give attention to the occupations, the institutions, and conditions affecting the welfare of our people.

To live in Iowa means opportunity unsurpassed. The beauty of our Iowa landscape is unexcelled. Iowa's productive resources are marvelous. Our citizenship is distinguished by the lowest percentage of illiteracy of any state in the Union.

But Iowa's future lies not in large fields and big business concerns so much as in smaller farms well cultivated and in small local industries intelligently managed.

We have faith that no backward steps will ever be taken in Iowa affecting the morality and advancement of our state and people. No section of the world may with greater reason or appropriateness adopt the motto, "Forward and Upward." Loyalty, intelligence, spirituality, and progressiveness to the extent of our ability, are cardinal virtues that should dominate the citizenship of a great state so fortunately situated. May our boys and girls become helpers in the making of a glorious future for our beloved state, Iowa.

With an abiding confidence in a better and greater state, this booklet is hopefully dedicated to IOWA.

Sincerely,

Albert M. Deyoe,

Superintendent of Public Instruction.

Des Moines, Iowa, June 30, 1916.

AN APPRECIATION.

It may well become the schools of Iowa to devote one day, at least, each year to a careful consideration of its history, its progress and its wealth. 'Tis well to have seen Iowa first, but it is often true that a better appreciation of what you have at home is yours after having seen and tasted the fruits of other fields.

The rock bound coast of New England has a history well written in its rugged walls; the beauty of the Great Lake region, with its climax of strength at Niagara and its cadence of delight at the Thousand Islands, cannot be denied; the wealth of genial hospitality, as revealed in the shade of Southern pine or in the plantation homes of mountainous Kentucky is proverbial; there is a grandeur and sublimity among the rugged peaks of the Needle and Teton mountain sections of the Rocky Mountain system that cannot be expressed; but, as between all these and Old Iowa, with a farm-born prosperity that has built happy homes and industrious cities, telephone and railroad equipment, school houses, colleges and universities, there can be no Neutrality,—we're for Iowa.

The people of Iowa must be educated to a better realization of what this great state is producing, in the many and various industries within her borders. One of the great industrial managers in Iowa has well said: "We have actually found, from past experiences, that people living in towns that contain worthy enterprises and industries are often the least informed about them."

There has never been a boom in Iowa, but there has been the steady march of prosperity. Her people have never been exultant because of a flood in the tide of progress, neither has the state been depressed by the ebb of such a tide; but there is always the rejoicing attendant upon having enough, together with the ever present feeling that our people will know well what to do with an abundance.

If we read of the glory of Iowa from what we know of its present condition, of what it has been or of what we have high hopes it will become in some long reach of time, our appreciation is only partial. The people of this state must know of and reflect upon the past history of their commonwealth; her present must be sincerely appreciated and a faith in her undimmed future must be confidently exercised. If this is done, the glory of the Hawkeye state will never die.

IOWA DAY.

Mrs. James R. King, Grundy Center, Iowa.

As Iowa Day should be celebrated by all Iowans, it must be made a day of vital interest to all. It should be a "get together" day under the leadership of the public schools, and should serve, not only as a means of bringing the school and the community into closer touch, but also as a means of presenting to people of all classes something of Iowa's significance to the nation.

Many people, especially in the rural districts, do not meet often enough socially and hear too little of what is going on outside of their own community. It would be an education in itself, for parents and children alike to discuss and hear discussed Iowa's splendid history, her various industries, her vast natural resources, and her opportunities for the future.

Much interesting and instructive information can be presented through the medium of illustrated lectures. Each year this special day might be advantageously devoted to some particular phase of Iowa. Motion pictures of the work in mines, the operation of mills and manufacturing plants of different kinds, would be of interest to the children as well as to their elders.

But as each community has its own particular interests, some time might be well devoted to the same industry in other parts of the country. Comparisons and contrasts, together with appropriate suggestions, will often start united effort for improvement at home.

The awakening of new interest in new things, and keener interest in the old things will not only inspire a spirit of loyalty and patriotism for Iowa, but will lead to a better and fuller appreciation of what Iowa has accomplished in the past, and of her prospects for future development.

If then, through the channels of the public schools, each district can be aroused to take more pride in their schools, and in their part of Iowa's future making, and more interest in what the rest of their state is doing, the future generations will grow up in an atmosphere of loyalty toward Iowa that cannot fail to make a "Greater Iowa."

FIRST WHITE MEN IN IOWA.

It was more than a hundred years after Marquette and Joliet first landed on what is now Iowa soil before the first white settlers came to establish homes on the west shore of the Mississippi. The first white man to settle in Iowa and to earn a living from the products of its soil was Julian Dubuque, a Frenchman, who came to what is now the city

of Dubuque, in 1788. He learned from the Indians of rich deposits of lead on the bluffs of the river and he obtained from the Indians the sole right to work the mines. He took ten French-Canadians with him and by a treaty at Prairie du Chien, September 22, 1788, with the Foxes, acquired the right and began operations. Dubuque built a log house, planted corn and other grains, and soon made his men comfortable in the little village. In March 1810, Dubuque died and was buried on a bluff near the village. A wooden cross above the grave bore the inscription, "Julian Dubuque, miner of the mines of Spain."

In 1795, or seven years after the first settlement made in Iowa, another Frenchman, whose name was Basil Gaillard, settled a little farther north along the river near the present site of McGregor in Clayton County. He is reported as having known Dubuque and the two men sometimes traded together. Several years later, after the death of Gaillard, his heirs sold the immense tract of land for the small sum of three hundred dollars.

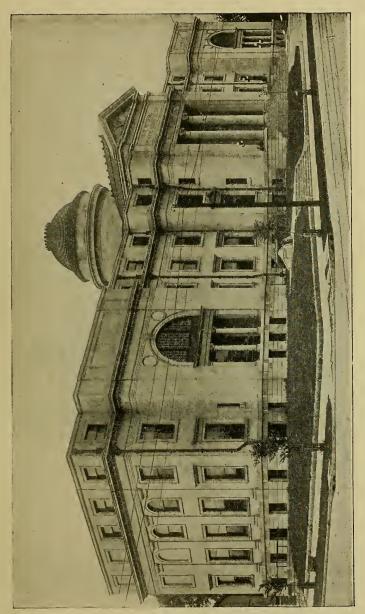
A third settler on Iowa soil was Louis Honori Tesson, who settled near Montrose in Lee County. He obtained a title to his lands from the acting Lieutenant-Governor of Lousiana Territory in 1799. In 1839 the United States issued a title to some of this land and it is said to be the earliest title to any soil in Iowa. Later, in 1820, came Dr. Muir, a Scotch surgeon in the U. S. army, who had been stationed in a frontier fort in Illinois and who later built a house at the present site of the city of Keokuk. Another early settler was Antoine LeClaire, who was among the first to settle at Davenport. A little later came Colonel George Davenport, a trader and army contractor, who settled in Davenport in 1820. It was after him that the city of Davenport took its name.—Meyerholz's "History and Government of Iowa."

CLAIMS TO IOWA TERRITORY.

Spain, by reason of the discovery by Columbus in 1492, was the first to claim the soil of Iowa.

England in 1497 sent an expedition under the leadership of John Cabot who discovered and explored the coast of North America from Labrador towards the south. This and later discoveries was the basis for the English claim south of the St. Lawrence river and north of the Spanish claims and extending from the Atlantic to the Pacific oceans. Thus Iowa was included in the claims of England.

France had established settlements in the valley of the St. Lawrence, and through expeditions along the Ohio and Mississippi rivers by



STATE HISTORICAL BUILDING, DES MOINES. 10W&

James Marquette and Louis Joliet in 1673. France thus became a claimant to Iowa soil.

Out of the disputes which arose between England and France over the ownership of the territory in the valleys of the St. Lawrence and Ohio rivers, the French and Indian war broke out in 1755.

By the treaty of Paris in 1763, France gave up to England her claims to Canada and her possessions east of the Mississippi river. France then ceded her possessions west of the Mississippi to Spain. Thus Spain came into undisputed possession of the territory of which Iowa formed a part.

About the year 1800 this territory west of the Mississippi river was transferred back to France. At this time Napoleon Bonaparte was at the head of the French government. The close of the French Revolution in 1799 had left him the most powerful leader in Europe. England was the rival of Napoleon and conflicts continued between the two countries, until Congress by treaty in 1803 secured from France, by purchase, the Louisiana territory for \$12,000,000, and debts of the French government amounting to \$3,000,000 were assumed. By this purchase the soil of Iowa for the first time came into the possession of the United States.

EARLY SETTLEMENTS.

Iowa was legally thrown open to settlement June 1, 1833, but long before that time reports had traveled to the East, and to the South concerning the fertile lands west of the Mississippi.

From 1833 to 1846 more than a hundred thousand people had found their way into the "Iowa Country." The first settlers to enter the territory came from Illinois, Ohio and Indiana, and located in the "Black Hawk Purchase," a strip about 40 miles wide along the Mississippi River.

Settlements were pushed westward gradually as the Indians were induced to relinquish their claims to the soil. Trading posts and Indian agencies preceded the homeseekers, and became centers around which the early settlers clustered. Many of these posts later grew into villages, towns and cities.

These words from Sabin's book, "The Making of Iowa," give some idea of the prize that had fallen to the lot of the early settlers.

"It is no wonder that the Indians refused to abandon until forced to by a superior power, this beautiful region they had invaded. Iowa was an ideal home for them. On the hills and in the valleys were the deer; on the prairies the buffalo. The noble wild turkey dwelt in the woods, and the prairie chicken and ruffed grouse were on every side, in meadow and in thicket. The numerous lakes and streams furnished fish and afforded passage for the bark canoes. The plum and grape were to be had for the picking. The hickory nut and the hazel nut were plentiful and maize waved in the fields.



EUGENE SECOR.
"Master of the Shelter," Forest City, Iowa.

The Mississippi on the east and the Missouri on the west, with the smaller rivers traversing the interior between, were highways from district to district. The climate, cold in winter, warm in summer, never was monotonous. The blue of the sky and the clearness of the air were not burdened as now with smoke from the cities, but were just as nature intended they should be.

It is easy to understand why the poor Indians, removed to other places, returned in little bands time and again, to look once more upon the scenes they loved so well."

THE PIONEER.

Eugene Secor.

Wouldst hear of valiant men, who, unafraid Bore hardship as of daily incidence?

Men who, alone, met and subdued grim fate?

Men who were mighty—men of will and purpose?

Turn back the ticking clock of fleeting years

To former days when Iowa was young,

Behold the pioneer!—the man who dared

To break in untamed fields the glebe of empire

And wearied not though harvest seemed to tarry,

Who drove the lazy savage from the garden

Laid out and planted by an unseen hand

For nobler use than hunting unearned game.

We read of valor on the serried field
Where regimental comrades, side by side
Provoke to courage every man his fellow.
The dear old flag ahead with all its stars
Inspiring them to reap immortal fame
If slain, and garlands if victorious—
O that is glory! and for this men die.
Eternal honor be to every man,
Living or dead who fought for th' starry flag,
But in the findings of the higher court
I fancy other heroes will be named
Than those from sanguine fields, though holy wars.

The pioneer met dangers oft, nor flinched Though none but God was standing at his side. No thrilling bugle call, no starry flag, No battle-cry to nerve the shaking frame. Each for himself must act without delay And stake if need be life upon the issue. The wife, mayhap, when husband was away To seek supplies, alone with baby, saw A devilish Sioux peek in her cabin window. No gun had she, but pluck, no weapon save Her wits. Did ever soldier on the field Meet foe or chance requiring steadier nerves? Of such the fiber of the web of state That made her valorous sons both strong and great.

THE LOG CABIN.

H. C. Hollingsworth, Ottumwa.

The log cabin of the rudest type, built in haste, to furnish protection and shelter from wind and storm, was a familiar picture of the early day. A brief description may not be out of place. A location had been agreed upon, the dimensions fixed, and logs of uniform size as far as possible, drawn together from the woods, notched and put in place by the neighbors at the "raising." The chinks between the logs were then filled and daubed with mud. The roof of clap-boards was held in place by poles placed transversely at regular distances apart. A big fireplace was usually provided, with a chimney of stones and split sticks cemented and lined with mud. The floor was the native dirt, or in some cases made of puncheons-logs split and smoothed on one side. One small window to admit the light was all the variation that marked the four walls. The structure was ready for its occupants. This was home, one of the dearest words of human speech. Here children were born, neighbor visited neighbor, and good cheer and frugality were nurtured. Early privations and hardships were partly compensated by the limited range of social demands, and family ties were perhaps the stronger on this account. As a historical relic the Iowa log cabin, with its sacred memories, should be transmitted to the children of the future.

THE LOG CABIN ON THE CLAIM.

Eugene Secor, Forest City, Iowa.

I can't but think how swift old Father Time

Has traveled since this fertile soil was turned

And made to laugh by pioneers who earned

Their scanty fare by toil and sweat and grime.

The house that daily smoked with odorous game

Was not a modern mansion built for show,

But hospitality shed its warm glow

In the old log cabin on the claim.

The next door neighbor lived a mile away,
But all were neighbors then, for all were poor.
The leather latch-string hung outside the door,
And all were free to come and eat and stay.
Sometimes an empty larder faced the dame,
But love and faith and courage always won,
For plenty smiled through father's traps and gun
At the old log cabin on the claim.

The ladder to the loft I climbed, and slept
Just like a kitten tho' the blizzards played
Fantastic tricks with arch and palisade,
And thro' the roof o'erhead the fine snow crept.
The winds may shake a dwelling with a frame
And all its joints creak like an unoiled cart,
But solid stood the house displaced by art—
The old log cabin on the claim.

How strong the naked trees in winter are!

They lift their sinewy arms to fight the storm,
And say to us, "fear not, I'll keep you warm,
I give my life to man, near and far."
And so the trees and I fast friends became,
They talked to me like folks the whole year through,
Their lore I loved and in their shelter grew
At the old log cabin on the claim.

I wonder if we're happier now than then?

I wonder if the present dizzy whirl

Brings comfort like the brooklet's gentle purl
That soothed the early settler in the glen?
Give back the friends I knew, I ask not fame,

I ask not wealth that brings but added care,
But rather give me one who loved me there,
In the old log cabin on the claim.

GETTING READY FOR STATEHOOD.

The organization of territories and the formation of states out of country included in the Louisiana Purchase is interesting history but too lengthy to be included here. Iowa was organized as a Territory in 1838, and included the present State, the greater part of the Dakotas, and of Minnesota. Settlements were made in various parts of this territory and the population increased so rapidly that a convention was called to meet in Iowa City, in 1844, to establish boundary lines. In Congress, during the next year, an act was passed which provided for the admission of Iowa, under certain fixed boundary lines, but in the same year this proposal was rejected by a vote of the people.

In May, 1846, a new convention presented, and in August of the same year the people adopted the constitution which Congress approved December 28, 1846, and thus admitted Iowa to the Union with its present boundaries.

THE SEAT OF GOVERNMENT.

Iowa has had three capital cities. The first territorial legislature met in Burlington in 1838 with Robert Lucas as Governor of the territory. This legislature appointed a commission to select a site farther to the west for a permanent capital. The site selected was that now occupied by Iowa City, and on April 30, 1841, by proclamation of the Governor, the capital was changed from Burlington to Iowa City, where it remained for several years after Iowa was admitted into the union. In November, 1857, the capital was removed to Des Moines. The first capitol building was a three story structure, located where the soldiers' and sailors' monument now stands. The present magnificent building was begun in 1873 and completed in 1885. The total cost of the building to July 1, 1885, was \$2,615,170.87.

THE SCHOOLS OF IOWA

While the citizens of the state have been making marvelous strides in developing farms, in building cities, in establishing manufactories, in erecting churches, in beautifying their homes, the educational interests of the people have not been neglected.

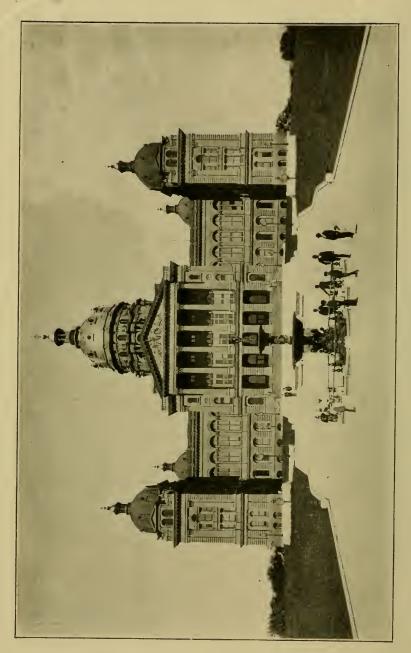
If "From Log Cabin to White House" gives pleasure in the contemplation of the career of an American citizen, surely from the log school house to the magnificent Consolidated School Buildings in which we find the children housed for purposes of education and training, must challenge our admiration in an even greater degree.

Our rural schools are being inspected and better supervised than ever before. The work of consolidation, and the elimination of the weak, one-room school is going steadily forward. Free tuition in high school for every boy and girl in the state is now provided; grade and secondary schools are being supervised by careful and competent inspectors; numerous well equipped denominational colleges are scattered throughout the state; and, to crown the system and complete the opportunities for professional and higher education, we point with pride to our State Teachers' College, The Iowa State College of Agriculture and Mechanic Arts and to the State University of Iowa.

THE RURAL SCHOOLS OF IOWA.

REASONS FOR CONSOLIDATING.

To give the children of rural schools a "square deal" has been in the minds of the educators of Iowa for a long time. An uplift in rural school conditions had been fondly hoped for. It was thought that the practical



workings of the Iowa school system were not touching the rural school situation as vitally as they should. The long delays, for a change for something better, came to mean discouragement and irritation. The one prime thought was: more Iowa children should be in the country schools.

Those who championed the unifying of country schools claimed, with many reasons for believing the claim a just one, that the courses of study maintained in rural schools, were not adapted to the environment of rural life; that rural schools were not maintained for a sufficient length of time to compare favorably with the work of the city schools; that efforts to bring about healthful conditions among rural school children were inferior to similar efforts made for city school children; that school buildings, grounds and equipment, of the rural schools, would suffer in comparison with the attractiveness and utility of the buildings, equipment and apparatus of city schools. The quality of teaching needed in the rural schools should be the very best; but, for reasons of inadequate equipment, too many classes, difficulties in securing good boarding places, irregular attendance, little social environment, all grades of children to be handled, that kind of teaching material is not easily secured and with very great difficulty retained for any length of service.

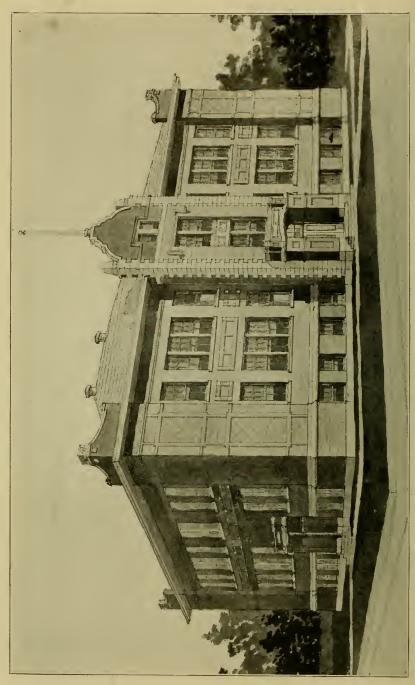
LOCATION OF THE CONSOLIDATED SCHOOL.

It is highly important that the Consolidated School be placed in the small town or village when convenient, but in territory so contiguous to rural life that urban and rural conditions may be blended and united for the betterment of each. There is no desire, on the part of the supporters of the consolidated school idea, to foist town and city conditions upon the rural people, neither would they have the rural ideals forced upon the town or city people. The town can no more exist without the country than can the latter survive in independence of the former. If the consolidated school does anything effectively, it will, at least, break down all barriers that have heretofore stood between the harmonious development of rural and urban interests.

The location of the consolidated school should be such that from five to fifteen acres of ground can be secured for playground, garden plat or agricultural purposes. This, in and of itself, will necessitate locating the buildings a little to one side of the small town or village.

KEEP THE BOYS AND GIRLS ON THE FARM.

If the education the boys and girls in the rural districts need is given them, the right kind of leadership and companionship furnished there will be less desire, on their part, to forsake the splendid opportunities of the farm, for the questionable appearances of city life. To keep the country



boys and girls on the farm is the great problem of modern education. It is not the real life of the city that so attracts the rural young people; it is the fascinating appearance of the fashions, the shops and the streets that so entices them. How often the drudgery, the constant contact with the daily grind of hard farm labor, with little time for uplifting pleasure, drives the youth of the rural community into the undesirable life of the city! We who accept the Consolidated Rural School Plan, prefer to do so because of its remedial effects in supplying the necessary incentives for the preference for rural life.

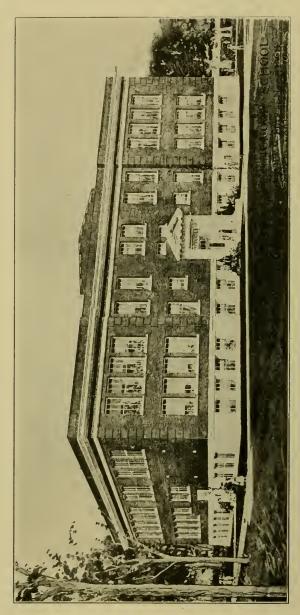
THE FORWARD STEP PROVES SUCCESSFUL.

Superstitious fear, as to the efficacy of consolidated schools in placing the work of rural school children more nearly on a par with the work of city school children, gradually vanished, however, and in 1897, at Buffalo Center, the first consolidated school district in Iowa was organized. Prior to April, 1913, there were only 17 consolidated schools, of sixteen or more sections, in 12 of the counties of Iowa; these, with four consolidated schools, with less than sixteen sections, constituted the total number of such schools in 14 counties of the state. Since April, 1913, there have been 158 new consolidated school districts formed, and these, with the 21 similar districts already formed, give a total of 179 consolidated school districts in Iowa, on May 17, 1916. The number of counties now having consolidated schools is 63.

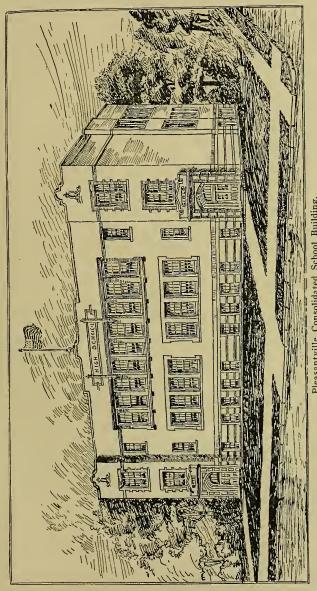
CONTRIBUTIONS TO CONSOLIDATION.

There have been numerous contributories to the work of consolidation, but the two forces, preeminent for real accomplishment over all others, have been the field workers and State aid. The people have at last caught the spirit of the work of consolidation, and are coming to see the great benefits to be derived from the work of these schools. There are differences to be amicably settled; adjustments and readjustments to be made; new plans of organization to be perfected and difficulties to be overcome; but just as long as thinking men and women can be brought to concentrate upon the one thing—that the rearing, training and educating of children is the greatest obligation God ever imposed upon them, there will be an acceptance of that duty and an aim to meet it, no matter what the cost.

There is nothing too good for the school children of this great commonwealth; and those children, first needing aid, should be the first ones to receive it. We have faith in the citizenship of the people of Iowa, and believe they will measure up to every obligation.



Linn Grove Consolidated School Building.



Pleasantville Consolidated School Building.

NEW STATE LAW REQUIREMENTS.

Now that elementary agriculture, domestic science and manual training are to be required in all the schools of the state, it is incumbent upon the teachers, who expect to teach in the rural schools, to prepare to teach these subjects. While the State University, the Iowa State College, the State Teachers' College, the independent and denominational colleges and other colleges as well are doing a great service in training teachers for such work, the demand exceeds the supply.

LEADERSHIP REQUIRED.

From out the workings of the Consolidated Schools must necessarily come the perfecting of plans whereby the work of the schools can be taken to the homes of the community. Upon the heads of these consolidated schools must fall the task of organizing the communities for social, educational and economic betterment. Much of the necessary equipment for the work of these schools will come with greater ease, if the community is interested in the work in hand. An aroused and interested public spirit rests largely with the school head and his corps of teachers; then how essential it becomes that the individual members of the teaching force be chosen from among those who are fitted by inclination and natural and acquired ability for the work.

These superintendents, or some other principal members of the teaching force, should be chosen for the year, so that the field work in agriculture, at least, may not be allowed to die prematurely with the annual closing of the nine months of school, but may be continued during the summer months.

THE PLEASANTVILLE CONSOLIDATED SCHOOL.

AN EXCELLENT EXAMPLE.

Here we find a handsome school building costing \$36,200. This modern school building is equipped with a splendid gymnasium, a spacious Assembly room, standard shower baths, an agricultural laboratory sunroom, and especially well adapted rooms for domestic science and manual training. The building is ventilated by means of an efficient Fan System; a Splendid Direct Fresh water system is installed and heat is supplied through the efficient Automatic Heat Control apparatus.

Other than this particular building, illustrated above, the Pleasantville Consolidated school district has another building for Intermediate and Primary grades. The school grounds are well adapted to the needs of the work that is being done,—five acres comprising the school plat.

Modern Home for Teachers.

In several of the Consolidated School districts, already established and in operation, can be found a modern home, with all the conveniences of the city home, for the superintendent and his corps of teachers. A recent visit to the Union Township consolidated school in Plymouth county, revealed the fact that the superintendent had a modern home, a garage and ample barn room for the fourteen horses used on the school vans. Other than that he has plenty of garden space for his own personal use and other ground for carrying on experimental farm work. In the yard we found well kept shrubbery and beautifully arranged flower beds. Such conditions are likely to add zest to the noble work of teaching; not that alone, but tenures of service will take on a degree of permanency.

TOWN AND CITY SCHOOLS.

SOME GENERAL INFORMATION.

In 1915, Iowa had rooms, in which school work was being done, requiring 20,919 teachers. There were enrolled as pupils 522,423 persons, between the ages of 5 and 21, and there was paid for teaching \$11,174,715.81. During the same year there were 625 Approved High Schools in the state, in practically all of which the subjects of Manual Training, Domestic Science and Agriculture were taught.

THE APPROVED GRADED AND HIGH SCHOOLS.

Schools to be classified and approved by the Department of Public Instruction must meet reasonable requirements in the lines of MATERIAL EQUIPMENT, in which the necessity for Primary Supplies, Supplementary Reading, Maps covering the work in Descriptive and Physical Geography, and also in History, Globes, Charts, Reference works, Music and Writing Manuals and Library books is emphasized; Organization, which includes the management, equipment and supervision of the school; Curriculum, which embraces the Course of Study and Plans for following it; Instruction, wherein, according to a well known educator, lies eighty-five per cent of the value of the school, and Spirit. In this last named element must be blended the harmonious workings of all the forces of any community, if it shall have a good school.

NORMAL TRAINING HIGH SCHOOLS.

The results of having established Normal Training in 167 of the best High Schools of the state are well shown in the 3,500 students enrolled this year in the Normal Training work; in the 1,738 regular High School Normal Training certificates which have been issued; but, best of all, in the reports from county superintendents, when they say: "The teach-

ers coming from the Normal Training High School Courses give us good work because they have had 'practice teaching' under able and close supervision. They are better prepared in plans and methods of instruction and class management."

Tuition in High Schools.

"The Thirty-fourth General Assembly recognized the right of every boy and girl in Iowa to a high school education." For all practical purposes this means that the privileges and benefits of the high school have been brought to every boy and girl in the state. The approval of schools by the Department of Public Instruction and the employment of field workers by the same department, the Tuition Law, and the granting of State aid to Normal Training High Schools and Consolidated Schools have proven wonderful incentives for the erection of model school buildings, for better equipment, for broader Courses of Study and better preparation for teaching.



East Des Moines High School.

HIGH SCHOOL SECTION. THE PROGRESS OF THE HIGH SCHOOL. Myrtle E. Pullen, Britt, Iowa.

Many, many years ago there came to the northeastern shores of this vast country of ours, a band of earnest, heroic people—with dreams. Because these dreams had been ignored, thwarted, and thrust roughly to

earth, the Pilgrim Fathers bade farewell to their fatherland and sailed forth to this unknown region that those dreams might be brought to life. The first one, the most vivid one, was of freedom to worship their God in their own way, and out of that dream there slowly grew another one, that their children might be taught to know how to live for the highest possible good. These men and women struggled with the rough and cruel forces of Nature and as they waxed stronger from the fight, so did this dream grow more vivid and more alluring—that their posterity might be enabled to gain knowledge wherewith to subdue and conquer the difficulties of living.

And, "silently as all great changes come" there has stepped forth majestically out of this dream, our remarkable public school system to which we point with pride. Every race, every nation has an educative system peculiarly characteristic of itself—look back to Sparta and see that unrelenting and terrible school of physical training to which its youth were sent—look at Ancient Rome and see that little group studying rhetoric and oratory, out of which group came Cicero, Horace and Vergil. Look at England and see that grammar school which paved the way for the easy culture of the gentleman, look at Germany and her gymnasium, sowing the seeds of scientific research throughout the earth—look long now at our own country and there stands forth one part of our school system different from that of any other nation, unique in kind, and typical of ourselves—the High School.

Not so long ago, this institution was not known to us, yet the germ of it was there, sprouting forth from the dream of our Pilgrim Fathers, and gradually taking shape. Before the Civil War there were about twelve of these institutions in all our broad land, now we find one in every town of any consequence at all, and from four to dozens in our large cities.

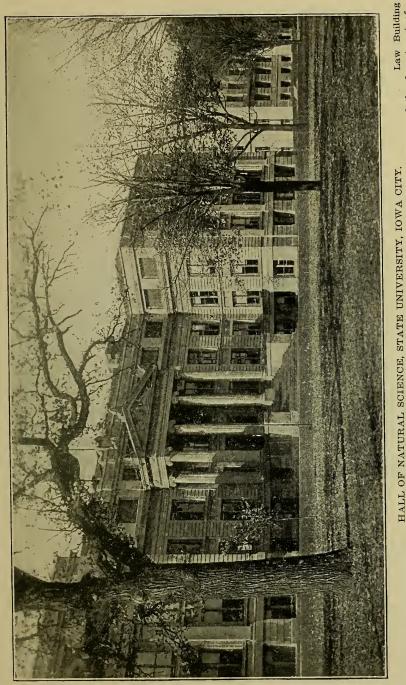
Clearly, no institution could have had such a phenomenal growth without the support of the people. And why has this support been given? Because the High School has sprung right out of the heart of the American people, much as Minerva sprang full-grown from the brain of Jupiter, and it has now become an integral part in the life of Americans. It affords to the child of the laboring man the same opportunities that it offers to the rich men's sons and brings all classes together in a social microcosm, the social world of his later life in miniature. And we all know that this is vastly important, for no Robinson Crusoe ever invented a telephone, wrote a Hamlet or discovered America.

For several years past, this High School of ours has been the scene of many changes. For what reason? Chiefly, because "they" said our High School graduates were "good for nothing" and could not "earn their salt." Well and good, the criticism, no doubt, was justified in many cases, so remedies had to be administered. As a result, we are teaching in our high schools those subjects which will prove useful to boys and girls and which will enable them to "make a living." This is altogether fitting and proper, for crime is bred in poverty, but there is danger that we make the dollar an idol and forget the higher ideals of life. And, as we have learned from other nations, money, without the knowledge of its best use, and without the illuminating guidance of high ideals, breeds more and worse crimes than poverty itself. Riotous living then becomes general and the downfall of a nation is inevitable.

While we are teaching our boys and girls how to make a living is there not time also to teach them how to live? One great mistake that our common people are making is in thinking that the high school should complete the education of the child and give him all the requisites for a useful life. But are we not mistaking the function of this secondary school and trying to make it perform a duty for which it was not intended? Consider for a moment the average age of the normal high school pupil—from 14 to 18—let us say. Just the age when he is awakening to his possibilities, when his dormant faculties are beginning to unfold, and he is beginning to see all things in a new light. The High School then should discover to him, his native tendencies, help him to recognize his abilities and to arouse in him a longing to accomplish some great and useful work.

It is not the purpose of the High School to cram knowledge into the child's head, as so many think, but to give him a vision of an uplifting life, full of service to mankind, and to place within his reach the foundation for the realization of that vision. Such, then, should be the aim of the high school, for it cannot, in the time allotted to it, completely fit the individual for his life-work. Whether he completes his education in the college or in Life's work-shop, the man of 40 will always look back upon the youth of 18 and realize that no institution could have given him a complete education at that age. The High School, then, should inspire the individual with a yearning for further knowledge—I care not whether he gets it in college or out—with a wholesome desire for the good things of life and with an appreciation of the value of the true, the good, and the beautiful, in art, in nature, and in his own life.

The High School should be high but we should remember that it is just high and not the highest. It should be that positive degree which will supply the germ and the force for a greater good, but it should never be regarded as having the capacity for doing all things. Teachers with a well balanced scholarship, clear insight, high ideals, and strength of



The Hall of Natural Science is of Bedford stone and houses the laboratories, lecture-rooms, and museums of the department of zoology. The laboratories and museum rooms are specially constructed, lighted and equipped. The museums contain large and varied collections. The building temporarily accommodates also the general library and has a large auditorium holding 1300 persons.

character, together with studies that will not only instruct, but uplift and inspire, should be the vital forces of the high school work.

It is to be hoped that the American people will love and cherish this dream of their Pilgrim Fathers and make the whole school system and each part of it a living, vital and indispensable factor in the life of every American, with the end in view that he shall be a super-citizen, not only of his own country but of the whole world.

STATE EDUCATIONAL INSTITUTIONS

The First General Assembly of Iowa established the State University on Feb. 25, 1847. In March, 1855, the University was formally opened to students, and in 1857 the location of the institution was fixed at Iowa City. With material advantages of more than half a hundred acres of



PRESIDENT R. A. PEARSON,
Iowa State College of Agriculture and Mechanic Arts, Ames.

rich land, thirty or more beautiful buildings, an adequate library equipment of nearly 200,000 volumes, an annual income of a million dollars from the state and other sources, the 3,000 and more students would seem well provided for. The University of Iowa is an institution and a power. It is an influence for uplifting the citizenship of the state of Iowa. It is an opportunity for every boy and girl in the state whether rich or poor, to obtain a higher education, to cultivate to the utmost his native capacities. The true spirit of the University is one of uplift and enlightenment. The University was created by the people of the state to meet such ends.

The purpose of the Iowa State College of Agriculture and Mechanic Arts is to serve educational needs in the fields of the industries and of the home. The Iowa Legislature of 1858 established this institution of learning and in 1862 it was endowed by the National Land Grant Act



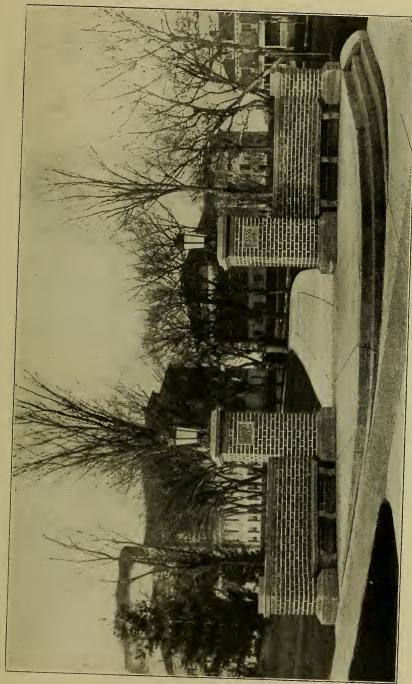
Iowa State College Campus.

of Congress. While it is a college of applied learning and gives due place to certain essential cultural subjects, yet its chief purpose is to train men for the field of agriculture, of engineering in all of its branches, of industrial science, of veterinary medicine, and women for the rapidly widening field of home economics. "Science with Practice" is its motto and its instruction, research, and extension work are carried on with the needs of the farm, the factory and the home always in view. The aim is to apply the work of the class room and of the laboratory to definite, everyday problems.

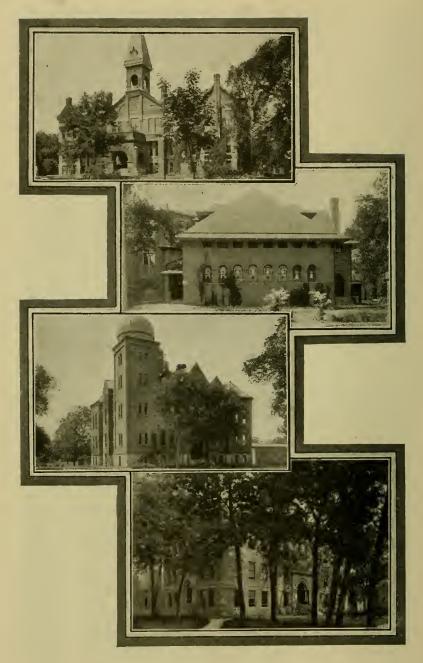
The purpose of the Iowa State Teachers' College is to prepare young men and women for the business of teaching in the public schools. Here is found superior opportunity for the giving of training and instruction. Well organized and adequately maintained training departments, where children of all grades are taught and given special attention, are found here. The Summer School sections are of an especial value to the regularly employed teacher, as it is here that all such can come and find well-thought-out courses of study prepared for every individual need, during the time when the majority of schools are not in session. Along with such work there will be realized a well deserved respite from the ordinary school routine, but, at the same time a re-creation for better service and an honestly expected financial reward.



PRESIDENT H. H. SEERLEY, Iowa State Teachers' College.



The Quadrangle at The State Teachers' College, Cedar Falls, Iowa.



Drake University, Des Moines

The Iowa State Teachers' College, during the present year, has extended the Study Center work until 97 of the counties of the state are receiving direct instruction for their teachers. This instruction and assistance comes from the Directors of the Study Center work.

Within very recent years the training of teachers for school work has been emphasized by the Extension Department.

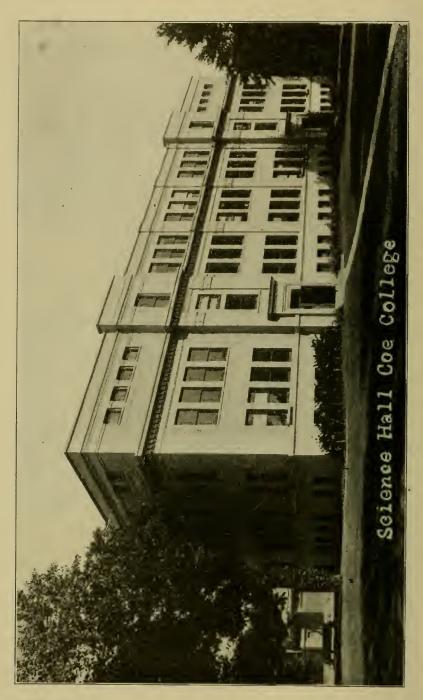
INDEPENDENT AND DENOMINATIONAL COLLEGES.

The State of Iowa is well supplied with independent and denominational colleges. Of the many such institutions of learning, mention will be made only of those that have been accredited for state teachers' certificates by the Educational Board of Examiners.

DRAKE UNIVERSITY, located at Des Moines, was founded in 1881 and is open to all classes of students without distinction of sex, religion or race. It is the largest college or university in the United States affiliated with the Disciples of Christ, and is the only educational institution in the State of Iowa representing that religious sect. General and Governor Francis Marion Drake, of Centerville, George T. Carpenter, of Oskaloosa, D. R. Lucas and J. B. Vawter, of Des Moines, were the men largely responsible for the organization of the University. General Drake was the first large donor.

LUTHER COLLEGE was established in 1861 at Decorah. It is under the direction of the Synod for the Norwegian Evangelical Lutheran Church in America. This college is distinctly classical and aims to give its students a liberal and positive training in religious instruction as a prerequisite to those who may wish to enter the Christian ministry.

GRINNELL COLLEGE was founded by Iowa pioneers the same year Iowa became a state. Its first class graduated in 1854. This was the first class to be graduated by an Iowa college. At first it stood the test of "pioneer times" with real heroism; it passed safely through the time of "co-educational discussion;" the trials of the "Civil War period" were not enough to dampen the ardor of its founders and the awful havoc wrought by the cyclone of later days was soon removed for a "better college." One of the two Iowa Chapters of the Phi Beta Kappa Society is located at Grinnell, and of the nine Rhodes Scholars from Iowa, four have been Grinnell men. It has the only college botanical garden west of the Allegheny mountains.



Grinnell College, Grinnell.

Coe College, located at Cedar Rapids, "was founded to train young men and women to clear thinking, deep feeling and generous ideals of Christian service. To this initial purpose it still adheres." It may well be noted that the growth of Coe College has been decidedly marked, the enrollment of students increasing within the past five years from 312



to 738, and the faculty from 32 to 55 in the same time. Her surroundings of beautiful homes, far famed libraries, together with a healthy social life and a vigorous business activity,—these all help to support the right college spirit.



Cornell College, Mount Vernon.

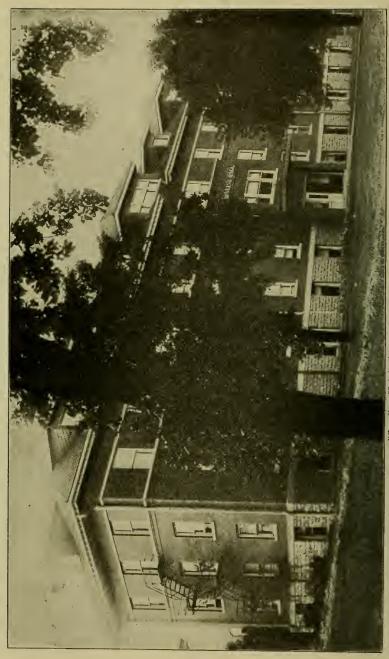
Cornell College, at Mount Vernon, had its origin in an old family name, together with Cornell University of New York, but the former institution had its name, at least twelve years before this name was attached to the New York University. From Norton's "Contribution to the History of Cornell College" we glean this bit of early history: "It is a beautiful and long-told legend, even if it be nothing more, that in 1851 Elmer Bowman came riding on horseback over the country to his new circuit and stopped on the lonely crest of the hill on which the college now stands. From its commanding summit vistas of virgin prairie and primeval forest stretched for ten and twenty miles about him. Here there fell upon him, the circuit preacher, the trance and vision of the prophet. He saw the far off future, he heard the tramp of the multitudes to come. Dismounting, he kneeled down in the rank prairie grass and in prayer to Almighty God consecrated this hill for all time to the cause of Christian education."

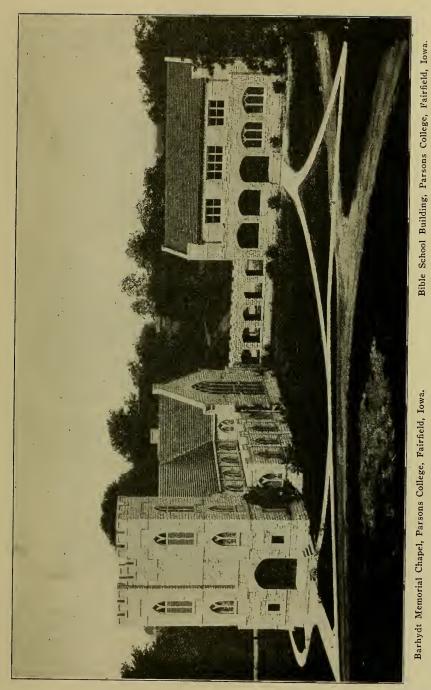
Ellsworth College, Iowa Falls, is one of the standard colleges of Iowa. It is an independent and non-sectarian school. This institution was made a Senior College in 1906. The name Ellsworth is one to enhance the value of any institution to which it might rightfully be applied. No location could be more ideal for a college than is the one where this college stands. The buildings and campus of Ellsworth College have an estimated value of \$160,000.00.

Dubuque College, located in the city of Dubuque, was formerly St. Joseph's College. The last named institution was established in 1873. The general setting of the college location is one of natural beauty. The control of the college is under the direction of the Most Reverend Archbishop of Dubuque and the diocesan clergy, a corporation, governed by a Board of Directors. The staff of instructors consists of thirty-six able men. The student enrollment numbers 465. An extensive Summer School is conducted here every summer by the Catholic University of Washington, D. C.

PARSONS COLLEGE, at Fairfield, was established in 1875 and is under the control of the Presbyterian church. Notwithstanding this fact, students from various churches find in Parsons College a good home, as is shown by the fact that twelve church denominations are represented in the student enrollment in this college year.

SIMPSON COLLEGE was founded as a seminary at Indianola in 1860, and incorporated as a college in 1867. At present it consists—first, of a College of Liberal Arts, comprising fifteen departments of instruction; second, an Academy; third, the Conservatory of Music; fourth, the





Barhydt Memorial Chapel, Parsons College, Fairfield, Iowa.

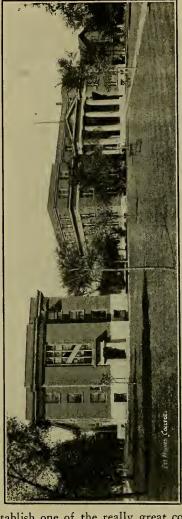
School of Business; fifth, the School of Education, and sixth, the School of Domestic Science. During the year 1915, six hundred sixteen students were in attendance, two hundred ninety-nine of whom were in the College of Liberal Arts.



Simpson College, Indianola

CENTRAL COLLEGE, at Pella, was incorporated as the Central University of Iowa in 1852, under the auspices of the Baptists of Iowa. It is now called Central College, because it does not undertake University work.

DES MOINES COLLEGE, Des Moines, while under the control of the Baptist denomination of Iowa, is an educational institution that is open to every well minded young man and woman, irrespective of religious preferences. This college and Central College have recently joined their

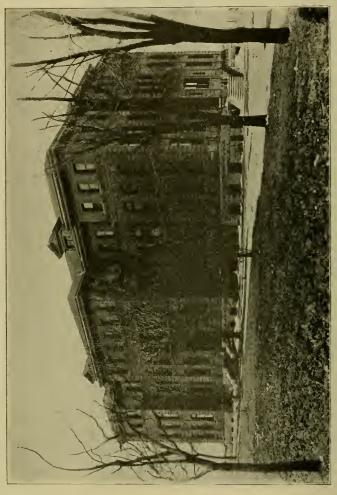


Des Moines College, Des Moines.

forces and will establish one of the really great colleges of the Middle West. Numerous locations have been suggested, but wherever the united institutions do go there will be found a representative Baptist College of great strength and rich in moral and religious influence.

PENN COLLEGE, at Oskaloosa, was first known as such in 1873; although it took its origin from the Educational Institute which was

founded a decade earlier. In endowment, library and laboratory facilities, number of departments, average salary and maximum teaching hours this college meets all the requirements of the Educational Board of Examiners for standard colleges. This college is conducted according to the principles of the Society of Friends.



Morningside College, Sioux City.

MORNINGSIDE COLLEGE, Sioux City, was organized in 1894, although springing from the University of the Northwest, an institution which was established in Sioux City in 1889. In the territory of northwest Iowa, southwest Minnesota, northeast Nebraska and southeast South Dakota there is a rich field to come under the influence of this college. This fact, together with the amalgamation of Charles City

College, will serve a mighty purpose in building up a strong educational institution at Morningside.

LEANDER CLARK COLLEGE, Toledo, is a co-educational institution, established in 1856, at Western, Iowa, by the Church of the United



Leander Clark College, Toledo.

Brethren in Christ. In 1881, to secure a more favorable location, this college was removed to Toledo, Iowa, where, in 1906, its name was changed to Leander Clark College, in recognition of a gift of \$50,000

by Maj. Leander Clark, a public spirited citizen of Toledo, to the permanent endowment of the institution.

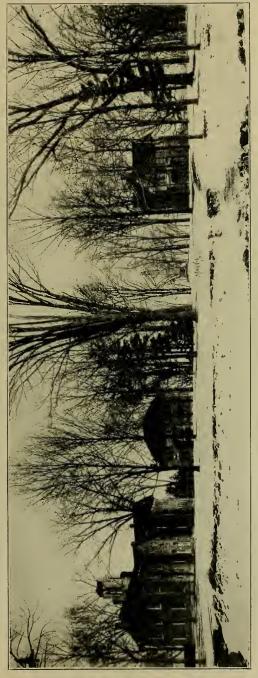
BUENA VISTA COLLEGE, Storm Lake, was founded in 1891 and is under the control of the Presbyterian Church. The motto of this college is: "Education for Service" and "it firmly believes that a college consists not in its buildings, equipment, or endowment alone, but in the vital mental and moral qualities and life of its faculty and student body."



Buena Vista College, Storm Lake.

IOWA WESLEYAN COLLEGE, Mt. Pleasant, is the oldest of the fully accredited colleges in the state, having been established in 1842. For many years, Mount Pleasant was called "The Athens of Iowa," on account of the educational spirit that seemed to pervade this particular section of the state. A new spirit seems to have possessed the friends of this college and we can naturally expect an advance along all lines of real modern college activities.

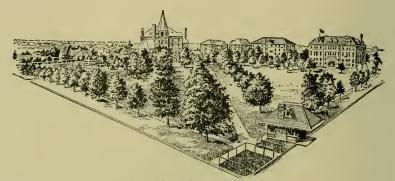
LENOX COLLEGE, Hopkinton, enjoys the honor of being the oldest Presbyterian college in the state. The thought of its founders was to establish a college to furnish the young people of that section of the state with the advantages of a Christian education. It may be of interest to note that, during the Civil War, the college was closed for a time



Lenox College Campus and "Memorial Monument" at Hopkinton, Iowa.

when its President, Rev. J. W. McKean, and all of the young men students volunteered for the army. All were accepted for service but one, Will Robinson, who was too young; and, of the total number, ninety-two, twenty-seven, with their college President, gave up their lives in defense of their country. At the close of the war, the handsome monument that graces the college campus, was erected in honor of these gallant men. This monument is the oldest of its kind in the state, and the oldest in the United States, of monuments erected by public subscription.

HIGHLAND PARK COLLEGE, Des Moines, was founded in 1889, by a half dozen Des Moines business men, with one building. Other buildings were added within a year or two, and the last building erected on the campus was finished late in 1915. This college enjoyed a rapid growth, and in 1911 came under the auspices of the Presbyterian Church.



Highland Park College, Des Moines.

Other than the degree courses there are twenty-seven short courses, each complete in itself, requiring from three months to three years for completion, and including most of the vocations and home economics. The vocational idea is especially strong at Highland Park.

UPPER IOWA UNIVERSITY, Fayette, would have a history to itself, had it done nothing more than to have graduated and sent out the late David B. Henderson, Iowa's celebrated Congressman, and one of the greatest parliamentarians this country has ever known. The College buildings consist of College Hall, South Hall, Science Hall, the Chapel, the Gymnasium, the Observatory containing a five-inch Alvin Clark telescope and "The David B. Henderson Library," the last named building being a gift from Andrew Carnegie.

LITERARY IOWA.

Johnson Brigham, State Librarian.

Ten years ago we talked of literary Iowa as mainly a speculative future, a promise rather than a fulfillment. To be sure, we had "Octave Thanet," Hamlin Garland and Emerson Hough, writers of fiction with names that spelled achievement in a difficult field; we had S. H. M. Byers, the uncrowned poet laureate of Iowa, whose "March to the Sea" and "Happy Isles and other Poems" had compelled the world to listen; we also had the well-rounded historical writings of Charles Ald-



JOHNSON BRIGHAM,
State Librarian of Iowa, and Author of "Iowa: Its History and Its
Foremost Citizens," "Life of James Harlan," etc.

rich and William Salter, and the well-laid foundations of a now famous library of Iowa history; and, too, a number of famous authors in the field of social science and in that of the natural sciences, and scores of locally well-known poets, essayists and writers of stories. And farther still in the background were the many "mute, inglorious Miltons" who were only subjectively literary.

This reference to the condition of literature in Iowa in 1906 is not intended to lead down to a sharp contrast—as of promise *then*; fulfillment *now*. The only point I would make is, that the promise of a dec-



MAJOR S. H. M. BYERS, . Des Moines.

ade ago is a stronger promise today and that the anticipated fulfillment seems nearer, and the satisfaction of those of us who love literature is fuller and better-grounded in achievement than it was ten years ago.

I.

Life's last years leave the unimaginative mind dry as summer dust; but the poet sings on into the years with undiminished fervor and with

a deeper sense of the soul's relation to the universe. Tennyson sang his sweetest note as he neared the end, and Browning and Whitman each uttered his bravest song as he prepared to "put out to sea." May we not anticipate even more soul-satisfying responses to the call which comes with the years to those among us who, in the course of a few years at most, will have passed "beyond our bourne of time and place"! This gratifying suggestion comes to mind as one reads "The Bells of Capistrano," a recent poem by S. H. M. Byers. The poem is built about "a ruin of enchanting beauty" and a legend of "its old-time splendor," in which a Spanish youth and maiden loved and well-nigh lost. Mr. Byers' latest short poem was inspired by the recent death of Henry Wallace, whom he well pictures as "one of God's warriors" who, hearing the call, went "with the tide,"-"not compassless nor starless, nor alone,"-but guided toward "the confines of a golden shore" by "a chart that he had known before." His latest long poem is "Glorietta, or the City of Fair Dreams," also suggested by the poet's study of the legends of the Southwest. The scene of the legend is Monterey during the Spanish occupation, and the poem is a tale of love and death, into which are woven many beautiful lines.

This outline sketch should include that well-known octogenarian-poet with the heart of youth, Tacitus Hussey, of Des Moines, whose "River Bend and Other Poems," (1896) has been followed by scores of short poems, chiefly humorous, through all of which there runs a rich vein of sentiment. His latest, "Return of the Prodigals" tells the pathetic yet quaintly humorous story of a family that has "jest got back to Iowa." His "Iowa, Beautiful Land," beautifully set to music by Hon. H. M. Towner, will be sung by generations of Iowans yet unborn.

The decade has brought to public notice a younger poet whose earlier verse attracted the attention of a few who saw in it a promise and potency which has since found fuller recognition. During the fourteen years of his connection with Drake University, Prof. Lewis Worthington Smith has been a prolific writer of verse, and nearly all the leading periodicals of the country have evinced appreciation of his lines. Not until latterly have his fugitive poems been garnered into volumes of verse. First came (in 1906) his "In the Furrow" a modest volume containing some of the best of his poems. The present year marks a rich flowering out of this poet's genius, a volume entitled "Ships in Port" and another,

inspired by the Great War, entitled "The English Tongue." His poet-creed stands revealed in this fine quatrain:

"Art is for life. Oh Poet, do not dream
Too long of fairies in the phantom stream
Of things impossible. Strike fire and hold
A torch to light the pathways of the bold."



PROFESSOR LOUIS WORTHINGTON SMITH,
Drake University.

His latest verse, "A Shadow of Things to Come" is a fine tribute to the memory of the late Henry Wallace.

Within very recent years a new planet has swam into our ken, and the few persistent watchers of the skies have passed the word along, until now many thousands have discovered that an Iowa poet of much promise, named Arthur Davison Ficke, is rapidly and yet with surprising steadiness rising toward the zenith in the literary world. With an almost perfect technic, and with rare delicacy of touch and youthful

vigor and boldness, there is no altitude, apparently, to which he may nor aspire. But, between flights, he promises to keep his feet firmly planted upon earth. Though a successful lawyer, in Davenport, Mr. Ficke takes time to write not only poetry but also some of the best literary criticism which finds its way into our periodicals. Since 1906 he has published "From the Isles," "The Happy Princess," "The Earth Passion," "The Breaking of Bonds," and several volumes of essays.



ARTHUR DAVISON FICKE, Davenport, Iowa.

Among the avocational poets whose souls occasionally find relief from the grind of fiction stands pre-eminently Hamlin Garland. His "Prairie Songs" are redolent of the wind-swept fields and forests, the flowerstrewn hillsides and the solitary mountain-tops.

Then there is the humorist, Ellis Parker Butler, who away back in the days of the first *Midland*, revealed the poet, laterly all too well concealed. Among the half-dozen poems contributed to that pioneer

Iowa magazine before he woke and found himself famous, there lies embedded this secret aspiration undreamt of in the philosophy of "Pigs is Pigs:"

"I care not that life's lease be long:
But I could wish my heart to beat
Until my work is all complete,
And I have sung my richest song."



EDWIN L. SABIN.

Among the more notable minnesingers of Iowa is Miss Belle E. Smith, of Newton, whose authorship of the popular poem, "If I Should Die Tonight," has been proven beyond further question by Prof. Gist of the State Normal College.

Edwin L. Sabin, humorist, short-story writer and novelist, also has his poetic side scarcely surmised by the readers of "When you were a Boy." Buried deep in that forest of woodsy suggestion, *Country Life in America*—in the number of October, 1902, is to be found this revelation of the poet-side of Mr. Sabin's nature:

"Upon the purple hillside, vintage-stained, In drowsy languor brown October lies, Like one who has the banquet goblet drained, And looks abroad with dream-enchanted eyes."

Seldon L. Whitcomb, long a professor in Iowa College, Grinnell, is the author of several volumes of short poems, many of them gems of purest ray.

Eugene F. Ware ("Ironquill") is claimed by Iowa though most of his life was spent in a neighboring state. Never a great poet, he struck a few popular notes which still reverberate. Nixon Waterman, an Iowan who has wandered far afield, has been too busy as a journalist to become a great poet; but he has contributed to the good cheer of many people.

One of the most soulful poems yet published in *Poetry* (Chicago) is "The Wife," by Helen Cowles Le Cron, of Des Moines. It makes the reader feel the loneliness of the mountains and the longing of the exile for the gentle land of Iowa where the days go dancing past, and where the poet's heart was very light, and life was very sweet. It is an open secret that Mrs. Le Cron writes the clever verse signed "Martha Hart" which appears almost daily in the *Evening Tribune*, of Des Moines.

II.

Many seem to regard literature as fiction—and fiction only. Nor is it any wonder, for during the last decade, far more than ever before, our poets, philosophers and reformers have chosen the fiction route as the most effective way to minds and hearts. Nor is it strange that in the public mind literature is synonymous with fiction, when our book-counters are piled high with "best sellers" and the sale of standard works is largely relegated to subscription houses and dealers in out-of-print books. You may be surprised to learn that, last year, in seventy-three free public libraries in Iowa, the average circulation of "adult fiction," as compared with all other books, was as 60 to 40, and that in fifteen of these libraries the circulation of adult fiction was more than 75 per cent of the entire output of books.

Recognizing this strong trend, many gifted Iowans have chosen fiction as their chief avenue of expression; and, in this difficult field of their choosing, not a few have succeeded. The three Iowans who ten years ago held the highest places as creators of fiction still firmly hold their respective places.

"Knitters in the Sun," published in 1887, made "Octave Thanet" (Miss Alice French, of Davenport,) famous as a writer of short stories. "Expiation" later revealed a staying power which found a fuller development in "The Missionary Sheriff" and "The Man of the Hour." Between the book first-named and Miss French's "A Step on the Stair" (1913) are several collections of admirable short stories, many of them located in Iowa. Possibly no finer type of the distinctively American short-story can be found than "A Captured Dream," first published in Harper's Magazine.

Though Hamlin Garland slipped away from Iowa in the early eighties, the stories that made him famous, "Main-Traveled Roads" (1890) which ran through many editions, also at least two of his earlier

novels, "A Spoil of Office" and "A Member of the Third House," with a score or more of his later short stories, had for their setting the homely farm life and the crude local and political conditions in Iowa in the seventies and eighties. His recent visit to Iowa revealed the same fond recollection to which he so eloquently referred in "Boy Life in the West," published in the Midland early in 1894. "I wonder," exclaimed he in closing, "if, far out in Iowa, the boys are still playing 'Hi Spy' around the straw-piles!.... That runic chant, with its endless repetitions, doubtless is heard on any moonlit night in far-off Iowa. I wish I might join once more in the game—I fear I could not enjoy 'Hi spy' even were I invited to join. But I sigh with a curious longing for something that was mine in those days on the snowy Iowa plains. What was it? · Was it sparkle of winter stars? Was it stately march of moon? Was it the presence of dear friends? Yes; all these, and more—it was Youth!" To the long list of Mr. Garland's achievements in literature since 1890 may be added: "The Long Trail," "Money Magic," "Boy Life on the Prairie," "The Shadow World," "Cavanaugh—Forest Ranger," and "Victor Olnee's Discipline."

Emerson Hough, perhaps the best-known of native Iowans in literature, passed many out-of-door years as a roving correspondent of *Forest and Stream*. In 1897 he well told "The Story of the Cowboy." Three years later, was published his first novel, "The Girl at the Halfway House." Next appeared, in 1902, a historical novel entitled "The Mississippi Bubble." Then followed a series of far-western tales into which are deftly woven many early experiences and observations on the trail and in the mountains. His more recent output includes "The Way of a Man," "Fifty-four Forty or Fight," "The Sowing," "The Young Alaskans," "The Purchase Price," "John Rawn" and "The Lady and the Pirate."

This is not an inventory. The most which can be attempted in this general review is to "hit the high places."

Turn from the latest "Who's Who in America" to the "Who's Who" of ten years ago, and note the rapid advance made by Iowa authors. Though 156 Iowans were mentioned in that work in 1905, few of these were authors. Of the 413 mentioned in 1915, many are so classified.

Ten years ago, the editors of "Who's Who," had not yet heard of Randall Parrish—though "When Wilderness was King" was written in 1904. Since then, at least eighteen novels, most of them historical, have made his name a household word.

Rupert Hughes had written "American Composers," "Love Affairs of Great Americans," and a few plays. Now, the list of his stories and

plays occupies a half-column of fine type, and the name of their author is persistently featured by editors, theatre and movie managers.

In 1905 Susan Glaspell (Cook) was reporting state house news, etc., for the *Daily Capital*, Des Moines. After trying her 'prentice han' on short stories, she finally (in 1909) committed her literary fortunes to a novel, "The Glory of the Conquered," the intensity and strength of which won high praise for its unknown author. "The Visioning." soon followed. The scenes are laid in Davenport and Chicago. Though not as well-sustained as her first work, its pictures of life among the lowly in Chicago are admirably drawn. Her latest novel, "Lifted Masks," is a fearless revelation of life as seen by its keenly observant author.



ELLIS PARKER BUTLER.

Another product of the last decade is Edna Ferber, who, by the magazine route, has traveled fast and far toward fame and fortune. Her clever creation, "Emma McChesney" is better known to thousands than

is the President's wife, and is as original as are any of Dickens' creations. A few years ago, Miss Ferber was making the great life study—human nature—from behind the counter in her father's general store in Ottumwa.

Among the younger of our Iowa born authors is Eleanor Hoyt Brainerd. Mrs. Brainerd grew from journalistic work on the *New York Sun* into short-story writing for magazines. Her books have enjoyed great popularity, chiefly because of their clever picturing of the subtle charm and irresistible humor of that unique product of the ages, the American girl. Her "Bettina" and her "Belinda" are better known to thousands, young and old, than our next-door neighbors are to us.

Another fiction writer, unknown ten years ago, but now known and read wherever public libraries supply the young with entertaining and wholesome reading, is Guielma Zollinger, of Newton, Iowa, whose "Widow O'Callaghan's Boys" and "Maggie McLenehan" are among our most deservedly popular children's books.

Herbert Quick, born in Grundy county, Iowa, was ten years ago the manager of a telephone company in Sioux City. Today his books are everywhere read. His "American Inland Waterways" is scarcely less known than are his popular "Aladdin & Co.", and "Virginia of the Air Lines."

Among the successful authors, in the difficult field of literature for children, is Emilie Stapp of Des Moines, whose "Squaw Lady," "Uncle Peter: Heathen," "Trail of the Go-Hawks," and other spirited and humorous stories have had many readers. Margaret Coulson Walker has also succeeded in this difficult field. Her "Bird Legends and Life," "Lady Hollyhock and Her Friends," and other charmingly written and beautifully illustrated books, published by Doubleday, have permanent value. Successful, also, are the Rand books by Ida M. Huntington, "Christmas Party for Santa Claus," "Garden of Heart's Delight," and "Peter Pumpkin in Wonderland."

The late Alice Ilgenfritz, of Cedar Rapids, author of "Highwater Mark," published in 1879, contributed to the *Midland Monthly* in the early numbers an extremely interesting serial, "Beatrice of Bayou Teche." This was followed in 1900 by a strong historical novel entitled "Chevalier St. Denis." Mrs. Jones' ill-health alone prevented the rounding out of a brilliant career.

Twenty-six or more titles, covering stories and plays, mark the literary output of Helen Sherman Griffith, daughter of the late Hoyt Sherman, of Des Moines, a lady of rare personal and literary qualities.

Her cleverness in the minor parts suggests possibilities for major parts in the near future of American literature.

A religious novel entitled "Passing the Word" by the late Helen H. Henshaw, prominent in Y. W. C. A. activities, has passed through several editions.

Walter Barr, of Keokuk, now professor in Highland Park College, is the author of a popular novel entitled "Shacklett," and of clever short stories, published in the palmy days of McClure's Magazine.

William Otis Lillibridge and Willis G. Emerson are novelists whose works threaten to break into the ranks of the best sellers. "Ben Blair" and "Where the Trail Divided" are Mr. Lillibridge's most popular works. Mr. Emerson's "Buell Hampton" still leads his later novels with a partial public.

A new and promising name in Iowa literature is Ethel Hueston, whose first book, "Prudence of the Parsonage," is knocking hard for admission into the lists of the best sellers.

The older readers of Current Literature miss the genial humor of "Bob" Burdette. They can still hear the "Chimes from a Jester's Bell," though the lovable jester is gone.

A critic in the Boston Transcript reviewing the short stories of the year 1915, mentions "one new periodical, The Midland, of Iowa City," as claiming "unique attention in that its nine short stories published in 1915 embody the most vital interpretation in fiction of our national life that many years have been able to show." High praise, indeed! The Midland editor, Mr. Frederick, has also published a number of fine poems and essays.

III.

President Thomas H. Macbride, of our State University, and Prof. Louis H. Pammel, of our State College, have made the secrets of plant life known to thousands. Carl Snyder, of New York, born in Iowa, has popularized applied science. Woods Hutchinson, has divested "Eugenics" of its fads and made living less hard—better worth the living.

One of the world's great writers on constitutional and institutional themes is Jesse Macy, of Grinnell, who though past his threescore and ten, is still actively engaged in the study of political science.

Prof. Charles H. Weller, a classicist and archaeologist of note, has added to his fame by his new work entitled, "Athens and Its Monuments." Frederick J. Lazell, of Cedar Rapids, is the Burroughs, or Thoreau, of Iowa, with a fine literary touch of his own besides. Charles Rollin Keyes and Arthur G. Leonard (Mr. Leonard now State Geologist of North Dakota) have followed in the illustrious footsteps of the late Samuel Calvin, Iowa's great geologist, in tracing the testimony of the rocks so clearly that the wayfaring man, though untrained in science, cannot err therein.



There passed away, in February last, one of the strong men of Iowa. Though primarily an editor, Henry Wallace was also an essayist. He had written several books; but the one most likely to last is his "Uncle Henry's Letters to the Farm Boy," which the Macmillans have run through many editions.

A vigorous writer on historical and economic themes is Frank I. Herriott, professor of economics and political science in Drake University. His virile writings have been numerous and have made themselves felt in recent legislation.

Frank L. McVey, president of the State University of North Dakota, who passed his childhood and youth in Des Moines, has made enduring contribution to the solution of public and governmental questions.

A prolific writer for the magazines is George E. Roberts, the New York banker, long editor of the Fort Dodge, Iowa, *Messenger*. His "Coin at School in Finance," a reply to "Coin's Financial School" made him famous. His later works are substantial contributions to political science.

Charles Edward Russell, one of the world's famous socialists, was born and reared in Davenport, Iowa. His books, literary and socialistic, are thoughtful and forceful.

Edward A. Steiner, of Grinnell, has drawn from old-world experiences and world-wide research the subject-matter of a dozen human-interest stories which have greatly enlarged our view of America's duty to its immigrant population.

A fine piece of constructive criticism is "Further Study of Othello," by Welker Given, published by the Shakespearean Press, and a valued volume in that society's famous collection.

In a class by herself is Julia Ellen Rogers, for years a teacher of science in Iowa. Reared on a farm and a thorough student of the fields and woods, her contributions to popular science created for her a place on the editorial staff of *Country Life in America*. Nearly every library in the country has on its shelves well-worn copies of her "Trees Every Child Should Know," "Earth and Sky," "Among Green Trees," etc.

IV.

In no other department of literary activity in Iowa has there been quite as much of promise and performance as in history. For this we are mainly indebted to The State Historical Society of Iowa, under the superintendency of Dr. Benj. F. Shambaugh, assisted by Messrs. Clark, Van der Zee, Pelzer, Horack, and others. In addition to the publication of The Iowa Journal of History and Politics, a library in itself, the Society has projected a Biographical Series to which Messrs. Parish, Pelzer, Gregory, Reid and Brigham have contributed; an Economic History Series to which Messrs. Downey and Brindley have each given

the results of scholarly research; an Applied History Series with contributions by Messrs. Shambaugh, Brindley, Downey, Horack, Peterson, Patton, Van der Zee, Briggs, Haynes and Gillin; a Social History Series with volumes by Messrs. Briggs and Gillin; and a long series of miscellaneous publications prepared by Messrs. Shambaugh, Wick, Perkins, Parish, Pickard, Deemer, Rich, McClain, McCarty, Clark, Van der Zee, Aurner, Jones, Weld, and others. A six-volume work of rare value has recently been published by the Society entitled "History of Education in Iowa" by Clarence Ray Aurner.



PRESIDENT THOMAS HUSTON MACBRIDE, Ph. D., LL. D., State University of Iowa, Iowa City.

In this connection special mention should be made of Mrs. Bertha M. H. Shambaugh, wife of Dr. Shambaugh, whose contributions to periodicals are overshadowed by her interesting and valuable social and historical study, "Amana: The Community of True Inspiration."

The history of the State has for many years been enriched by the *Annals of Iowa*, long edited by Curator Charles Aldrich, of the Historical Department of Iowa, and ably continued by his successor, Edgar R. Harlan.

Benjamin F. Gue's "History of Iowa," is pre-eminently valuable as a first-hand story of events in the last half-century in which, as reformer, legislator and lieutenant-governor, the author himself modestly bore an important part.

S. H. M. Byers' "Iowa in War Times," first published in 1888, is still the most valuable record of the heroic period in Iowa history.

A voluminous work was recently issued by the S. J. Clarke Publishing Company, Chicago, entitled "Iowa: Its History and Its Foremost Citizens," bringing the story of the state down to the year 1916. The work includes a series of "Historical Biographies" ranging all the way from Julien Dubuque to Senators Dolliver and Cummins. A one volume school, library and home edition is in course of preparation.

Among the historical writers of America, Irving B. Richman, of Muscatine, takes high rank. His works are permanent contributions to American history. The most valuable of these is his "California under Spain and Mexico." His "Rhode Island, Its Making and Its Meaning," in the American Commonwealth series, was honored with an Introduction by James Bryce. His "John Brown Among the Quakers" is an interesting and valuable chapter to Iowa history.

Surely this brief and incomplete showing reveals a degree of actual achievement and sure promise which ought to satisfy the most skeptical that at least a substantial foundation has been laid for a glorious superstructure of Iowa literature.

SELECTIONS BY IOWA AUTHORS.

MY CYCLONE-PROOF HOUSE.

By Ellis Parker Butler.

Two or three months ago, when I was just deciding to build a house, I saw in our local paper a description of a cyclone-proof dwelling. Now, if there is anything I dislike, it is to have a full-blooded, centripetal twister come cavorting through the air and wipe my dwelling off the earth. It annoyed me to go down cellar for a bottle of raspberry jam, only to find that while I was below, my house was flipped into Dugan's potato-patch, and deposited there tails up, heads down, and not a thing left on my lot except my neighbor's hencoop and the wind-proof, fire-proof, water-proof eight-per-cent mortgage that I put on the lot myself four years ago next August, and which could not be blown off with four tons of dynamite.

Having such a deep-rooted hatred of the cyclone, I was naturally much taken with the account of the cyclone-proof house, and I had one built on my lot. The house was as simple as it was perfect. The principal feature was a sort of circular track or rail on which the house could revolve, a fin or rudder being placed over the kitchen in such a manner that it must necessarily catch the wind and swing the house around on the circular track. In this way the front of the house was always in the teeth of any strong breeze. And here came in the practical part of the scheme; for in the front room over the hall was a port-hole from which protruded a small cannon. This cannon discharged loaded bombs at any approaching cyclone-cloud. The explosion of the bomb in the bosom of the cloud was said to rip the airy devastation into flinders.

When my house was completed it was a source of pride to me and a source of wondering curiosity to the townsfolk. On the first breezy day I operated the revolving device, and found it worked perfectly. The house is supposed to front north, and the breeze came strongly from the south, and my pulses thrilled with pleasure as the house swung slowly and grandly around in the wind.

But, unfortunately, the wind stayed from the south until nightfall, when it died, leaving my house in a most peculiar position, with the front porch adjacent to the hog-pen, and the kitchen within three feet of the front gate. I prayed earnestly for wind for a week, but none arose, and during that time my house was the joke of the village. At the end of the week I rented Silas Bogg's ox-team, and pulled the house into its normal position; and it was indeed a great comfort to be able to

empty the dish-water without having to carry it from the kitchen through the dining-room and parlor, and out at the front door into the back yard.

However, the real test of the house did not occur until about a month thereafter. To tell the truth, I am a little timid in a storm since our house was blown into Dugan's field; and as for my wife, she would rather break her neck falling down the cellar stairs than risk it in a May zephyr. This timidity accounts for our loss of presence of mind the night it stormed. We were in bed and asleep, and I was dreaming I was at sea on a very dizzy vessel, when my wife shook me and said a fearful storm was coming; and, in fact, the house was spinning round like a top, now making six or eight revolutions to the right, and then suddenly whirling to the left, like a half-witted kitten with a fit. The wind seemed to have no stability, and veered constantly, and I could not see a yard from the window where I stood ready to fire the cyclonebomb at first sight of the monster. My wife stood at my side, and gazed with me out of the window into the blackness. Suddenly she gave a cry of alarm. "There! there!" she shrieked; and I too saw the cyclone-cloud rising dark and ominous before us. In a thought I had fired the cannon; the bomb sped on its way, and I heard it explode with a terrific crash. For a moment we waited in breathless anxiety, and then she fell into my arms, sobbing, "Oh, Henry, Henry! we are saved!"

And we were.

The cyclone didn't catch us that night. It couldn't. In fact, there was no cyclone. It was just a plain, everyday blow—a little one-horse, two-for-a-nickel wind.

But I had tried the cyclone-bomb gun. The next morning I went out to see what I had been gunning at. It was my barn! In the dark I dare say it resembled a cyclone, but by day it resembled a pile of kindling-wood. I had simply shot a first-class red barn into atoms, and had slaughtered a good, steady, five-year-old family horse, and a nice spotted Jersey cow with two toes on each foot and burs in her tail.

Cyclone-proof houses? No! No, Sir! Not for Uncle Harry! I have had my experience. I am only glad the wind was from the south instead of from the west when I fired the fatal bomb. Had it been from the west, I should have knocked the internal effects clean out of my neighbor Murphy's home, to say nothing of neighbor Murphy himself.

And, by the way, if you hear of any one who would like to purchase a cyclone-proof house, he can get one from me at reduced rates, and I will throw in a sixty-foot lot with a hearty mortgage on it, and a brandnew red barn on which softly rests a brand-new mechanic's lien.

THE GUARD ON THE VOLGA.

S. H. M. Byers.

What is it you're watching, good soldier,
In the forest so dark and lone
I have heard of no Turkish cannon,
And our Czar is at peace at home.
Why stand on the Volga River,
When the night is so cold and drear?
My Christ! must a soldier shiver,
When never a foeman is near?

Hark! peasant, across there, an army
Lies hid in the brushwood and moss,
And the sergeant said: "Watch by the ferry,
And see that no picket shall cross."
I charged the red ditches at Plevna,
And knew the foes' sabres by sight.
It was fierce! it was death! but I never
Knew fear in my life till to-night.

By Heavens! I tremble. What is it?
What is it, this army so near?
Why don't the drums beat to the rescue?
Why is not our Skobeleff here?
Are hordes of the desert upon us,
Are China's fierce legions at war,
And we but one guard on the Volga?
God save our good land and the Czar!

A fiercer foe, far than the Tartar,—
And armies of China are small
When counted beside the battalions
That muster to conquer them all.
'Tis the Pestilence marching in silence,
That hides in the brushwood and moss;
But the sergeant said: "Stick to the ferry,
And see that no picket shall cross."

Great God! Do they think that picket
Can stop what the Heavens command?
That bullets may wrestle with angels,
To keep the Plague out of the land?
Oh! soldier, I'm but a poor peasant,
Yet know that God has but one way.
Trust sabre, nor rifle, nor picket,
But kneel by the Volga and pray.

And peasant and soldier together
Knelt down in the forest alone,
And prayed that that night on the Volga
The hand of the Lord should be shown.
And though the Plague lurks on the border,
And hides 'mid the brushwood and moss,
God's angels keep watch o'er the ferry,
And see that no picket shall cross.

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SONG FOR LABOR DAY.

Lewis Worthington Smith.

We are the builders, the makers,
The ultimate shapers of earth.
Out of our blood and our sinews
The joys that shall be must have birth.
We are the builders, the makers;
Without us life falls upon dearth.

We are the hopers, the dreamers.

We toil and we trust in the years.

We fashion the fabrics of pleasure

For those who take toll of our tears.

We are the hopers, the dreamers;

We must not fall back upon fears.

We are the powers, the fulfillers.

We harness the uttermost lands,
We thrill to man's passionate fancies,
Make fact of his burning commands.
We are the powers, the fulfillers;
The Destinies throb in our hands.

We are the wills, the creators.

We breathe on the dust of our dreams.

This is the seed-time of labor;

To-morrow the purple fruit gleams.

We are the wills, the creators;

Dawn breaks on the hills and the streams.

We are the slaves and the masters.

We wait till we come to our own.

We shall be lords of the highways.

We fashioned them stone by stone.

We are the slaves and the masters;

We bow till we sit on the throne.

"PRAIRIE MEMORIES."

Hamlin Garland.

Reference has been made to Hamlin Garland, now a temporary exile in New York City—and to his love for his boyhood home in the West. Here is his initial poem in "Prairie Songs":

A wide cloud-peopled summer-sky; Sea-drifting grasses, rustling reeds, Where young grouse to their mothers cry, And locusts pipe from whistling weeds; Broad meadows lying like lagoons Of sunniest waters, on whose swells Float nodding blooms to tinkling bells Of bob-o'-linkum's wildest tunes;

Far west-winds bringing odors, fresh From mountains clothed as monarchs are In royal robes of ice and snow, Where storms are bred in thunder-jar; Land of corn, and wheat, and kine, Where plenty fills the hand of him Who tills the soil or prunes the vine Or digs in thy far canons dim—

My Western land, I love thee yet! In dreams I ride my horse again And breast the breezes blowing fleet From out the meadows cool and wet, From fields of flowers blowing sweet, And flinging perfume to the breeze. The wild oats swirl along the plain; I feel their dash against my knees, Like rapid plash of running seas.

I pass by islands, dark and tall, Of slender poplars thick with leaves; The grass in rustling ripple, cleaves To left and right in emerald flow; And as I listen, riding slow, Out breaks the wild bird's jocund call.

Oh, shining suns of boyhood's time!
Oh, winds that from the mythic west
Sang calls to Eldorado's quest!
Oh, swaying wild bird's thrilling chime!
When the loud city's clanging roar
Wraps in my soul as if in shrouds
I hear those sounds and songs once more,
And dream of boyhood's wind-swept clouds.

THE ROSE OF IOWA.

By S. H. M. Byers.

Hast seen the wild rose of the West, The sweetest child of the morn? Its feet the dewy fields have pressed, Its breath is on the corn.

The gladsome prairie rolls and sweeps, Like billows to the sea, While on its breast the red rose keeps The white rose company.

The wild, wild rose whose fragrance dear To every breeze is flung, The same wild rose that blossomed here When Iowa was young

Let others sing of mountain snows, Or palms beside the sea, The state emblems is the rose Is fairest far to me.



The Prairie Rose of Iowa.

THE WIFE.

Helen Cowles Le Cron.

I am young, O shaggy mountains; I am young and you are old; You are mighty, brooding pines, and I am small;

And your great, gaunt shadows crush me with a horror still and cold, And your sullen silence holds me like a pall.

Just today I went for water to a little silver spring

Where the air was sweet and scarlet berries grew;

And my dreams came flocking homeward and my haunting fears took wing

Till the night crawled forth to meet me. Then I knew.

I am stranger to your silence; I am alien to your might; I am longing for a little, laughing world

Where the days went dancing past me, for my heart was very light,—
And from many friendly hearths the smoke up-curled.

Yet he loves you, lonely mountains, and he says he loves me too, And his cabin nestles trusting at your feet;

But my heart is torn with longing for the gentle land I knew—And the careless hours when life was very sweet.

Will you always frown upon me through the weary, weary years

Till my dream-home fades to silence and to night?

I was gay, O brooding mountains, till you taught me pain and tears.
I am alien to your solitude and might.

FROM "SONNETS OF A PORTRAIT PAINTER"

A remarkable group of fifty-seven sonnets by Arthur Davison Ficke appeared in the *Forum* of August, 1914. Following is the twentieth of the series:

Ah, life is good! And good thus to behold From far horizons where their tents are furled The mighty storms of Being rise, unfold, Mix, strike, and crash across a shaken world: Good to behold their trailing rearguards pass, And feel the sun renewed its sweetness send Down to the sparkling leaf-blades of the grass, And watch the drops fall where the branches bend. I think today I almost were content To hear some bard life's epic story tell,—
To view the stage through some small curtain-rent, Mere watcher at this gorgeous spectacle.
But now the curtain lifts:—my soul's swift powers Rise robed and crowned—for lo! the play is ours!

FROM "THE MISSISSIPPI BUBBLE"

Mention has been made of Emerson Hough's historical novel, "The Mississippi Bubble". Without attempting to retell the story, the editor will have to content himself with two quotations illustrative of Mr. Hough's masterly style. Here is a picture of the valley of the Mississippi (Massasebe) as the Illini left it and as John Law and Mary Connynge found it:

Thus began, slowly and in primitive fashion, the building of one of the first cities of the vast valley of the Massasebe; the seeds of civilization taking hold upon the ground of barbarism, the one supplanting the other, yet availing itself of that other. As the white men took over the crude fields of the departed savages, so also they appropriated the imperfect edifice which the conquerors of those savages had left for them. It was in little the story of old England herself, builded upon the races and the ruins of Briton, and Roman, and Saxon, of Dane and Norman.

Under the direction of Law, the walls of the old war house were strengthened with an inner row of palisades, supporting an embankment of earth and stone. The overlap of the gate was extended into a reentrant angle, and rude battlements were erected at the four corners of the inclosure. The little stream of unfailing water was led through a corner of the fortress. In the center of the inclosure they built the houses; a cabin for Law, one for the men, and a larger one to serve as store room and as trading place, should there be opportunity for trade.

"The smoke of the new settlement rose steadily day by day, but it gave signal for no watching enemy. All about stretched the pale green ocean of the grasses, dotted by many wild flowers, nodding and bowing like bits of fragile flotsam on the surface of a continually rolling sea. The little groves of timber, scattered here and there, sheltered from the summer sun the wild cattle of the plains. The shorter grasses hid the coveys of the prairie hens, and on the marsh-grown bayou banks the wild duck led her brood. A great land, a rich, a fruitful one, was this that lay about these adventurers.

A soberness had come over the habit of the master mind of this little colony. His hand took up the ax, and forgot the sword and gun. Day after day he stood looking about him, examining and studying in little all the strange things which he saw; seeking to learn as much as might be of the timorous savages, who in time began to straggle back to their ruined villages; talking, as best he might, through such interpreting as was possible, with savages who came from the west of the Messasebe, and from the South and from the far Southwest; hearing, and learning and wondering of a land which seemed as large as all the earth, and

various as all the lands that lay beneath the sun—that West, so glorious, so new, so boundless, which was yet to be the home of countless hearth-fires and the sites of myriad fields of corn. . . Let others hunt, and fish, and rob the Indians of their furs, after the accepted fashion of the time; as for John Law, he must look about him, and think, and watch this growing of the corn.

He saw it fairly from its beginning, this growth of the maize, this plant which never yet had grown on Scotch or English soil; this tall, beautiful, broad-bladed, tender tree, the very emblem of all fruitfulness. He saw here and there, dropped by the careless hand of some departed Indian woman, the little germinating seeds, just thrusting their pale green heads up through the soil, half broken by the tomahawk. He saw the clustering green shoots—numerous, in the sign of plenty—all crowding together and clamoring for light, and life, and air, and room. He saw the prevailing of the tall and strong upthrusting stalks, after the way of life; saw the others dwarf and whiten, and yet cling on at the base of the bolder stem, parasites, worthless, yet existing after the way of life.

He saw the central stalks spring boldly up, so swiftly that it almost semed possible to count the successive leaps of progress. He saw the strong-ribbed leaves thrown out, waving a thousand hands of cheerful welcome and assurance—these blades of the corn, so much mightier than any blades of steel. He saw the broad beckoning banners of the pale tassels bursting out atop of the stalk, token of fecundity and of the future. He caught the wide-driven pollen as it whitened upon the earth, borne by the parent West Wind, mother of increase. He saw the thickening of the green leaf at the base, its swelling, its growth and expansion, till the indefinite enlargement showed at length the incipient ear.

He noted the faint brown of the ends of the sweetly-enveloping silk of the ear, pale-green and soft underneath the sheltering and protecting busk. He found the sweet and milk-white tender kernels, row upon row, forming rapidly beneath the husk, and saw at length the hardening and darkening of the husk at its free end, which told that man might pluck and eat.

And then he saw the fading of the tassels, the darkening of the silk and the crinkling of the blades; and there, borne on the strong parent stem, he noted now the many full-rowed ears, protected by their husks and heralded by the tassels and the blades. "Come, come ye, all ye people! Enter in, for I will feed ye all!" This was the song of the maize, its invitation, its counsel, its promise.

Under the warped lodge frames which the fires of the Iroquois had spared, there was yet visible clusters of the ears of last year's corn. Here, under his own eye, were growing yet other ears, ripe for the harvesting and ripe for the coming growth. A strange spell fell upon the soul of Law. Visions crossed his mind, born in the soft warm air of these fecundating winds, of this strange yet peaceful scene."

And here is an impressionistic sketch of the great success which followed failure:

Lady Catherine Knollys, left alone, gazed upon the sleeper. John Law, the failure, lay there, supine, abased, cast-down, undone; shorn utterly of his old arrogance of mind and mien. Fortune, wealth, even the boon of physical well-being—all had fled from him. The pride of a superb manhood had departed from the lines of his limp figure. The cheeks were lined and sunken, the eyes, even had the lid not covered it, lacked the late convincing fire. No longer commanding, no longer strong, no longer gay and debonair, he lay, a man whose fate was failure, as he himself had said.

The woman who stood with clasped hands, gazing at him, tears welling in her eyes—she, so closely linked to his every thought for these many years—well enough she knew the story of his boundless ambitions, now so swiftly ended. Well enough, too, she knew the shortcomings of this mortal man before her. Even as she had in her mirror looked into her own soul, so now she saw deep into his heart as he lay there, helpless, making no further plea for himself, urging no claim, making no explanations nor denials, no asseverations, no promises. Did she indeed see and recognize again, as sometimes gloriously happens in this poor life of ours, that other and inner man, the only one fit to touch a woman's hand—the man who might have been? . . .

And so at last the gray dawn broke again. The panes of the high mullioned windows were tinged with splashes of color. The pale light crept into the room, slowly revealing and lighting up its splendors.

With the dawn there came into the heart of Catherine Knollys a flood of light and joy. Why, she knew not; how, she cared not; yet she knew that the shadows were gone. The same tide of peace and calm might have swept into the bosom of the man before her. He stirred, moved. His eyes opened wide, in their gaze wonder and disbelief, yet hope and longing.

"Catherine," he murmured, "Catherine! Is it you? Catherine! Dear Kate!"

She bent over and softly kissed his face. "Dear heart," she whispered, "I have loved you always. Awake. The day has come. There is another world before us. See, I have come to you, dear heart, for faith, and for love, and for hope!"

FROM "THE CAPTURED DREAM."

In Mr. Brigham's "Literary Iowa" reference is made to "Octave Thanet's (Miss Alice French's) short story, "The Captured Dream." The editor has taken the liberty of reproducing enough of this beautiful sketch of country life in Iowa to enable the reader to note its idyllic quality.

Somers, an artist, has come out from Chicago to paint a portrait of a lady. He is riding on his bicycle over the country road. He sings the dainty song of Andrew Lang, concluding with:

"In dreams doth he behold her,

Still fair and kind and young."

He rides up to the home of Farmer Gates, who tells him, the minute he saw one of Somers' drawings in a Chicago paper, the artist's conception of Columbia, he said to: "Mother" (his wife):

"Mother, if that feller had you to set for him, he wouldn't have made it much more like." About the same height, too, only fatter; but so like the way she looked when he was courting, it give me a start. I've been seeking somebody to paint a picter for me of her for a long spell. The minnit I seen that, I says, 'There's my man. There's the sofy; set down, said Gates, who seemed full of hospitable cheer. "I'll git a blind open. Girl's gone to the fair, and mother's setting out on the back piazza, listening to the noises on the road. She's all ready. Make yourself to home. Pastel like them picters on the wall's what I want. My daughter done them." His tone changed on the last sentence, but Somers did not notice it; he was drinking in the details of the room to describe them afterwards to his sympathizing friends in Chicago. He smiled vaguely; he said, "Yes, certainly;" and the host went away well content. "What a chamber of horrors!" he thought; "and one can see he is proud of it."

Then he heard a dragging footfall, and there entered the mistress of the house. She was a tall woman who stooped. Her hair was gray and scanty, and so ill arranged on the top of her head that the mournful tonsure of age showed under the false gray braid. She was thin with the gaunt thinness of years and toil, not the poetic, appealing slenderness of youth. She had attired herself for the picture in a black silken gown, sparkling with jet that tinkled as she moved; the harsh, black, bristling line at the neck defined her withered throat brutally. Yet Somer's sneer was transient. He was struck by two things—the woman was blind; and she has once worn a face like that of the pretty girl—not her face, but a face like it . . . Her eyes were closed, but she came straight towards him, holding out her hand. It was her left

hand that was extended; her right closed over the top of a cane, and this added to the impression of decrepitude conveyed by her whole presence.

She spoke in a gentle, monotonous, pleasant voice. "I guess this is Mr. Somers, the artist. I feel—we feel very glad to have the honor of meeting you, sir."

No one had ever felt honored to meet Somers before. He thought how much refinement and sadness were in a blind woman's face. In his most deferential manner he proffered her a chair. "I presume I am to paint you, madam?" he said.

She blushed faintly. "Ain't it rediculous?" she apologized. "But Mr. Gates will have it. He has been at me to have somebody paint a picture of me ever since I had my photograph taken. It was a big picture, and most folks said it was real good, though not flattering; but he wouldn't hang it. He took it off, and I don't know what he did do to it. 'I want a real artist to paint you, mother,' he said. I guess if Kitty had lived she'd have suited him, though she was all for landscape; never did much figures. You noticed her work in this room, 'aint you?-on the table and chair and organ-art needlework. Kitty could do anything. She took six prizes at the county fair; two of 'em come in after she was in her last sickness. She was so pleased she had the picture—that's the picture right above the sofy; it's a pastel—and the tidy-I mean the art needlework-put on her bed, and she looked at them the longest while. Her pa would never let the tickets be took off." She reached forth her hand to the chair near her and felt the ticket, stroking it absently, her chin quivering a little, while her lips smiled. "Mr. Gates was thinking," she said, "that maybe you'd paint a head of me—pastel like that landscape—that's why he likes pastel so. And he was thinking if—if maybe—my eyes was jest like Kitty's when we were married-if you would put in eyes, he would be awful much obliged, and be willing to pay extra, if necessary. Would it be hard?"

Somers dissembled a great dismay. "certainly not," said he, rather dryly; and he was ashamed of himself at the sensitive flutter in the old features.

"Of course, I know," she said, in a different tone than she had used before—"I understand how comical it must seem to a young man to have to draw an old woman's picture; but it ain't comical to my husband. He wants it very much. He's the kindest man that ever lived, to me, caring for me all the time. He got me that organ— me that can't play a note, and never could—just because I love to hear music, and sometimes, if we have an instrument, the neighbors will come in, especially Hattie Knight, who used to know Kitty, and is a splendid

performer; she comes and plays and sings. It is a comfort to me. And though I guess you young folks can't understand it, it will be a comfort to him to have a picture of me. I mistrusted you'd be thinking it comical, and I hurried to come in and speak to you, lest, not meaning anything, you might, just by chance, let fall something might hurt his feelings—like you thought it queer or some sech thing. And he thinks so much of you, and having you here, that I couldn't bear there'd be any mistake."

"Surely it is the most natural thing in the world he should want a portrait of you," interrupted Somers, hastily.

"Yes, it is," she answered, in her mild even tones, "but it might n't seem so to young folks. Young folks think they know all there is about loving. And it is very sweet and nice to enjoy things together; and you don't hardly seem to be in the world at all when you're courting, your feet and heart feel so light. But they don't know what it is to need each other. It's when folks suffer together that they find out what loving is. I never knew what I felt towards my husband till I lost my first baby; and I'd wake up in the night and there'd be no cradle to rock—and he'd comfort me. Do you see that picture under the photograph of the cross?" "He's a pretty boy," said Somers.

"Yes, sir. He was drowned in the river. A lot of boys in playing, you know, and one got too far, and Eddy he swum out to help him. And he clumb up on Eddy, and the man on shore didn't git there in time. . . ."

"Father and I went through that together. And we had to change all the things we used to talk of together, because Eddy was always in them; and we had to try not to let each other see how our hearts were breaking, and not shadder Kitty's life by letting her see how we missed him. Only once father broke down; it was when he gave Kitty Eddy's colt." She stopped, for she could not go on. . . . At this instant the old man, immaculate in his heavy black suit and glossy white shirt, appeared in the doorway, bearing a tray.

"Father," said the old wife, "do you mean to tell me you are going to pay a hundred dollars jest for a picture of me!"

"Well, mother, you know there's no fool like an old fool," he replied, jocosely; but when the old wife turned her sightless face towards the old husband's voice and he looked at her, Somers bowed his head. . . .

He spent the afternoon over his sketches. Riding away in the twilight he knew that he had done better work than he had ever done in his life, slight as its form might be; nevertheless, he was not thinking of his work, he was not thinking of himself at all. He was trying to shape his own vague perception that the show of dainty thinking and the pomp of refinement are in truth amiable and lovely things, yet are they no more than the husks of life; not only under them, but under ungracious and sordid conditions, may be the human semblance of that "beauty most ancient, beauty most new," that the old saint found too late. He felt the elusive presence of something in love higher than his youthful dream; stronger than passion, fairer than delight. To this commonplace man and woman had come the deepest gift of life. "A dream," he murmured; "yes, perhaps; but he has captured it."

THE EXTENSION AND COMPLETION

OF THE

IOWA STATE CAPITOL GROUNDS

By Edgar R. Harlan, Curator, Historical Department of Iowa.

The world's Columbian Exposition in Chicago in 1893, greatly enlarged the vision and strengthened the courage of American civic authorities. There was exemplified the advantage of placing public buildings in such relation to each other that use and beauty should come of groups as well as of separate structures.

No state in the Union has been benefited by this movement more certainly nor directly than has Iowa. A dozen of our cities and towns now have good landscape plans for their future building officially approved. This sweep of popular mind through the field of civic education caught the interest of the governors of Iowa. Consideration of the landscape elements of the present and future Iowa State Capitol resulted.

· Governor Larrabee in 1890 successfully urged the Legislature to improve the Capitol grounds. Governor Shaw in 1900 urged the acquisition of a large area north of the Capitol. Governor Cummins in 1906 gave point to this thought of enlargement, and reported the acquisition of a certain space to the east. Governor Garst in 1909 presented the matter more forcefully than had any of his predecessors, and in the plainest business language. In 1913 Governor Carroll, on the Allison Memorial Commission, being squarely confronted with the problem of placing a fifty thousand dollar gift to Iowa "on the Capitol Grounds or an extension thereof," as the law required, appealed to the legislature for a solution of the problem. Governor Clarke's inaugural utterance rose in its character to a challenge to the present generation to prepare for the future and in a special message

he drove his purpose like a thunderbolt through official indifference to a general and just consideration of the subject.

The Allison Memorial Commission, of which Governor Carroll, and after him Governor Clarke, was a member, studied the task of so placing an exquisite work of art that it would be neither lost in the immensity of the Capitol Building, nor by its very delicacy and refinement detract from the dignity or beauty of that structure. This commission



-ER Halay

procured a plan showing its choice of sites for the memorial, and at the same time showing the capitol itself, its environments as they are, and as they should be in time to come. This plan was presented; the legislature entertained the request with favor; investigated the probable expense of acquiring all the additional lands embraced within the plan, and on April 10, 1913, enacted as Chapter 14, Acts of the Thirty-

fifth General Assembly the law directing the Executive Council to acquire and to improve all these grounds as follows:

"All buildings, monuments, statuary, memorials, fountains, and improvements hereafter erected upon the capitol grounds shall be located in accordance with the plan covering said extended grounds as contemplated herein submitted as the Allison Memorial Commission plan * * * and that said grounds shall be laid out with respect to drives, streets, avenues, malls, walks, bridges, terraces and other improvements in all respects as contemplated and suggested by said plan and said plan is hereby made a part of this act."

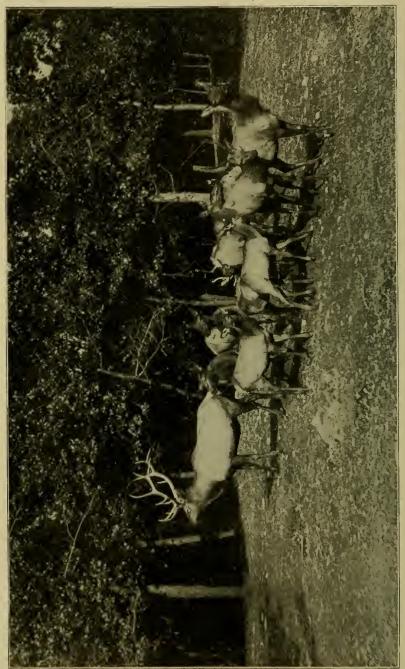
The Executive Council has already purchased the grounds and contracted for a large part of the landscape work. It is not intended nor expected that it shall immediately all be done. No one now living will probably ever see it finished. But by ideally locating each landscape object that may be produced, whether a blue grass sward, native oak, or stately buildings, the grounds will remain forever as pleasing as those of any of the great expositions. Mr. E. L. Masqueray, whose neverto-be-forgotten landscape triumph of the Louisiana Purchase Exposition at St. Louis remains unsurpassed in beauty, made the plans for the improvement of the Capitol Grounds. He took the unrivaled arrangement of nature, planned its restoration and provided order in adding the works of man. It will be the most beautiful setting for a state capitol America affords; the most complete retrieval by a state of a landscape opportunity in the experience of man.

IOWA'S GREATEST NEED.

LOYALTY TO STATE INTERESTS.

C. R. Scroggie, Des Moines, Iowa.

In everything that goes to make a state self-supporting and practically immune from financial panics, Iowa stands at the top. The state is young and has not yet learned the lesson of co-operation. The state of Iowa will come unto her own when every city, town and community within her borders holds the interests of the state above petty, local, selfish enterprise. It is possible to be a local patriot and still be an enemy of the state. A man is worthy of being a citizen of Iowa when he contributes willingly to the support of his city, county, state and nation. This spirit added to what nature has done for us will place and keep Iowa at the top.



-PAGE SEVENTY-EIGHT

GOOD ROADS.

Alson Secor, Des Moines, Iowa.

If I were asked what, in my opinion, is the one great need of Iowa at this time, I would reply without hesitation, good roads—roads that are good every day in the year.

Good roads are the foundation of rural contentment. They would break the shackles of fear that keep the Iowa ruralist in bondage. If it were not for the constant fear of bad roads the common expression heard every time a farmer starts to market, or on a pleasure trip, "I wonder if it will rain," would not have the significant meaning that it now does.

He must gauge his load to what the team can haul over muddy roads. He cannot take advantage of motor truck power and haul immense loads at high speed because of the bad roads. He cannot start on an auto pleasure trip without wondering if it will rain and make the return almost impossible. The children must trudge through the mud to and from school unless someone takes time to get them by team. It dulls his enthusiasm for better schooling, and makes the consolidated school seem like a nightmare because of the slow progress with which a team drawn school bus makes its rounds in bad weather. With good roads and auto busses, the consolidated schools would flourish like a green bay tree.

With good roads the weather would not affect the size of the load to be hauled to market; would not spoil the plans for a pleasure trip; would not make much difference with the intended social gatherings of farmers clubs, schools or churches, and would not be so ruinous to regular school attendance.

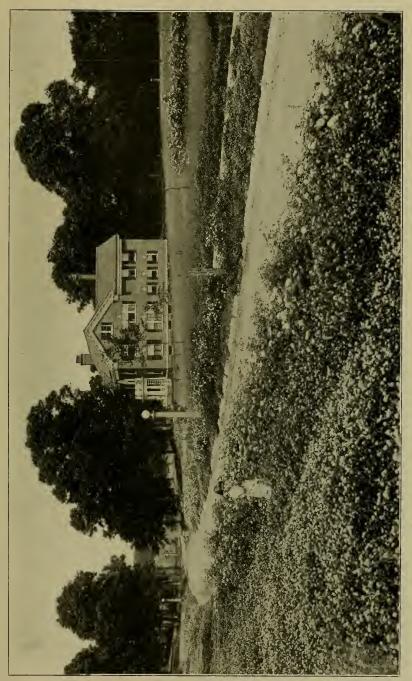
A good hard surfaced country road is as good as a city sidewalk and pedestrians can walk for miles dry shod and clean footed. Iowa, with her great variety of weather that is as fickle as a flirt, needs good roads more than any other one thing. She has everything else that makes for contentment, except those things that are so closely related to daily travel, and with the advent of good roads Iowa will have all that rural folks can wish for.

CIVIC PRIDE.

By L. H. Pammel, Ames, Iowa.

The "city beautiful" or the "country beautiful" depends in a large measure on the attitude of the community. During pioneer days, when new land was brought under cultivation, the forests were cut and removed—there was little time to give to the community as a whole. Roads





An Ideal Farm Home in Iowa. Courtesy International Harvester Company.

were laid out for the purpose of convenience, houses were built largely for temporary use, and all of the buildings were located for convenience rather than to please the eye.

We cannot find fault with what our fathers did during these hard and strenuous times. The pioneer had to work long hours to keep his family together and arrange for some of the comforts of life. Those of middle age can all look back with pardonable pride at the strenuous days of boyhood and girlhood.' This pioneer work is done and it is for the present generation to provide the machinery to make life more pleasant.

Throughout the state of Iowa there is a widespread interest in civic pride. It is more or less contagious. Our larger cities have started improvements in making the city more beautiful. As an illustration, see what Davenport has done in the way of planting gardens with flowers and adorning the city with beautiful shrubs and flowers; or see what Cedar Rapids is doing in the way of planting squares and providing parks for everyone. Again see what Des Moines has done during the last decade in removing the ugly and untidy spots along the Des Moines river. Our smaller cities are catching the fever of doing something to provide its citizens with beautiful places for recreation. Such women as Mrs. Whitley of Webster City, and a score of others are preaching the gospel through the Woman's Federated clubs.

There is still room for improvement. The Iowa Highway Commission has pushed vigorously for better highways and the planting of these highways with ornamental plants. It would be a good plan if some competition could be started among the cities and communities for the best kept lawns, streets and vacant places.

The phase of the subject that has interested me most is the matter of the growing of weeds along the highways, vacant lots and farms of the state.

We have a good law on the unlawful weeds of the state but in how many townships is this law enforced? I don't know of a single township where this law is enforced. It is true there has been some improvement in recent years. The question of enforcing the law depends largely on civic pride. There are many places in the state where not only all of the unlawful weeds are permitted to grow but where many other unsightly plants are found on the highways and the farm.

Great ragweeds and sunflowers reach their foliage above the fences. Cocklebur and horsenettle have undisputed sway in the fields. The highways have an abundance of weeds which make it impossible to travel with safety. It seems to me that if we had more civic pride these weeds would be removed. Every community should develop a civic pride in its homes. The lawns and gardens should be well kept.



An Iowa Farm Scene. Courtesy International Harvester Company.

The problem might also be applied to our school grounds. There are few school grounds in the state that are kept as they should be. Here and there the grass is cut and the weeds are removed. Could we not see that these grounds are planted with ornamental plants, trees and shrubs? The educational value would be greatly increased by placing names on the plants.

Every community should appoint a committee to make a report on the best kept lawns, the best kept gardens and best kept highways. A kindly rivalry between cities would develop civic pride.

BETTER RURAL CULTURE.

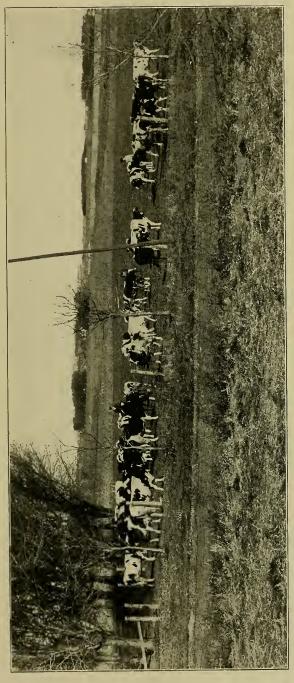
DISSEMINATION ON SOUND INSTRUCTION AMONG RURAL PEOPLE AN ABSOLUTE ESSENTIAL IF WE MAINTAIN A HEALTHY NATIONAL EXISTENCE

James Atkinson, Des Moines, Iowa.

Material prosperity must always be the basis of social advancement, and by this is meant a prosperity not for the few but for all classes, and ultimate success in the struggle for national existence can be embraced only by those peoples who maintain their agricultural population on an exalted plane of life. Neglect of land has been the crowning blunder of all nations whose downfall has been recorded in history, and the evils attributed to unjust and unequal taxation have always grown out of neglect of the land.

Wherever you find the farmer regarded as a hewer of wood and drawer of water you will find a canker in the heart of society. Such an attitude always leads to a rush of rural population to the cities, and to stem this tide requires the operation of sound educational forces. We must, therefore, remember that in giving instruction on how to make two blades of grass grow where but one grew before we do not overlook the close relationship that exists between the creation of wealth on the one hand, and the comforts and surroundings that make life worth while, on the other.

One of the urgent needs of the present time is to create an agreeable social farm life, suited specifically to the needs of the farmer and his family. Many agencies are contributing in an important degree to this end. The telephone has helped immensely and rural mail delivery has been a great aid, while road improvement, wherever it has been tried out thoroughly, has been an educational agency of great significance. However, important as these things are, they are not sufficient to contribute to a satisfying rural existence without the aid of a suitable and appropriate supply of agricultural literature.



Some Holstein Beauties on the Farm of William B. Barney.

Three decades ago we had no agricultural literature to speak of and only with the establishment of our Experiment Stations has there been made available reliable scientific instruction on the various branches of the farmer's calling. Throughout the United States we have today thousands of men digging and delving for the truths of nature, and their findings are placed upon the farmer's reading table free for the asking. The pages of these bulletins are ever teeming with instruction, and the light they have shed on farm problems has aided tremendously in creating a new enthusiasm for farm life.

If in the past the city has offered superior attractions over the country, let it be borne in mind that a sensible reform to check this movement is under way. Men are beginning to understand that there is nothing in the nature of drudgery about farm work when the mind is trained to a proper appreciation of values. When agriculture is once regarded as an intellectual calling the farmer experiences a new inspiration. To him the soil becomes a wonderful laboratory of living forms, teeming with useful, as well as harmful, organisms.

There is, therefore, instant appeal to the higher intelligence of the worker and always a prompt response by nature when effort is put forth in harmony with her laws. The chemical substances of the soil furnish most interesting actions and reactions, and to fathom these is an important part of economical production. Plant life affords a never-ending stimulus to mental culture, while animal life in its widely divergent forms is always an illuminated text for the individual seeking advancement in knowledge. Such knowledge, however, does not come to the individual as the result of inspiration, but through accepted channels, there being now, as heretofore, no royal road to learning.

It is here that we encounter the influence of the farm press, which is more and more coming to be regarded as the farmer's text book. Good as are the bulletins of our Stations, and beneficent their influence, there is need for a stepladder, as it were, to a knowledge of their contents, and this agency is being supplied by the agricultural paper. It is the function of the editor to put into the language of everyday life the technicalities of the scientist, and already great reliance is placed upon this educational agency.

It is through the pages of his paper that the farmer jostles elbows with the scientist in the most intimate fashion, so that the press becomes a silent and sure educational force to which must be credited already much of our material and social progress. The agricultural paper has literally enlarged the campus of educational institutions until it includes the fields in which our crops grow as well as the yards and buildings

that restrain and house our live stock, and embodies in its wide embrace the intimate home life of our rural people.

It is to the agricultural press that we must appeal as the most potent agency of conservation, because through its educational influences men are being reasoned into rational practices in the handling of soils so that their potentialities are not destroyed, while at the same time they are responding liberally to the magic touch of tillage operations.

To those interested in animal and plant improvement, the agricultural press becomes the text book of chief reliance, because here they are constantly finding the records of those who are blazing the trail and an outline of the methods of men who have attained success becomes, as it were, a lamp to the feet.

While it may be argued that the agricultural press performs the function of contributing to material prosperity only, let it be borne in mind that this is the foundation stone upon which social progress depends. It is in no sense materialistic to say that the refinements of life, though of primal importance, are secondary in the manner in which they are acquired, and we thereby end where we begin by giving to the agricultural press liberal credit for what it is doing to enhance prosperity, and in doing this it contributes in the highest degree to the developments of the intellectual and spiritual life of those who till the soif.

CITIES OF IOWA.

While Iowa can boast of no large cities, yet a trip through and about the state will reveal the fact that she has several hundred cities in the making, and many other hundreds of goodly sized towns appropriately placed within her borders.

Des Moines, "the City of Certainties," heads the list as the capital and chief city. Her form of government is a "model" and the energy of her people is shown in one of the best river fronts in the United States.

Sioux City, "the natural gateway to the Great Northwest," is the giant trading center of the whole northwest. The largest creamery and butter factory in the world is located here. The population of this city has increased more than 30% during the past five years.

Davenport, "the Park City," is a city of rare scenic beauty. Her city parks, together with the Rock Island Arsenal Reservation, have a total of 1,140 acres.



Washington Park, Davenport.

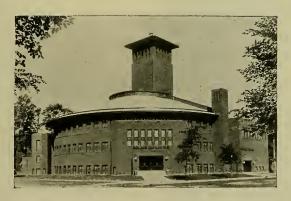


Commercial Club, Davenport.



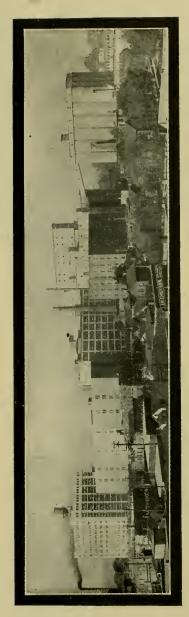
Western Flour Mills, Davenport.

Dubuque, "the Heidelberg of America," is one of the Iowa cities that is proving itself superior as a manufacturing center. It was in this city that the U. S. torpedo boat, Ericsson, was built and equipped. The U. S. revenue cutter, William Windom, was also built and equipped here. The Edison phonograph cabinets are built in Dubuque.



St. Paul's Methodist Church, Cedar Rapids.

Cedar Rapids has been called "The Model City of the Middle West." Here is located the largest cereal mill in the world, the chief product of which is known as the "Quaker Oats." The largest independent starch factory in the world, as well as one of two of the largest independent packing plants in the world is also located in this city.



The Home of the Quaker Oats Manufacturing Plant, Cedar Rapids.



The T. M. Sinclair Company's Packing Plant, Cedar Rapids.

Council Bluffs, "the Railroad Center of Iowa," is the focal point of eight of the largest railway trunk lines in the United States. The largest candy factory in the United States, west of Chicago, is found here. The largest greenhouse west of the Mississippi river is located here.



Cedar Rapids Commercial Club.

Clinton, "the Lumber City," might also be called the "Furniture City," since eight furniture manufacturing plants are located there.

Burlington, "the Orchard City of Iowa," might well have been called the "City Beautiful," because of its location in one of the most picturesque



Grand Ave. Bridge and City Hall, Cedar Rapids.

forest sections of the state. Here it was that the first capital of the territory and of the state was established. The largest wholesale furniture house in the United States has Burlington for its manufacturing point.

Ottumwa, "the Hub of the Corn and Meat section," is located in the richest coal mining section of the Mississippi valley. Ottumwa has one of two of the largest independent packing plants in the world. The only stoneware factory in the state is located here. Ottumwa has the largest Hay Tool factory west of the Mississippi.

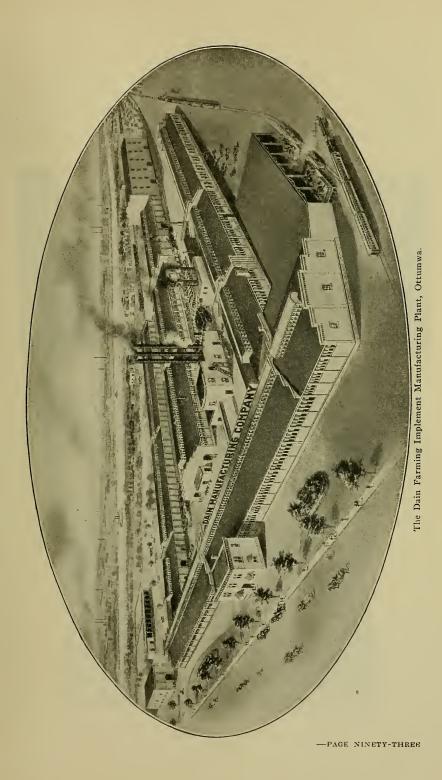


In Beautiful Bever Park, Cedar Rapids.

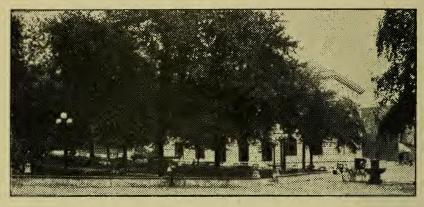
Muscatine is known as the "Pearl Button City of the United States," there being some thirty-five button factories, in the city, in which fresh water clam shells are being made into button blanks and buttons of



Car Coal Loader, Ottumwa.



various sizes and kinds and shipped to all parts of the world. The annual output in this one industry will aggregate over three million dollars. The fresh water clams are gathered from all the rivers and brought here to be made into buttons; and the government, itself, has recognized the value of the industry by establishing a biological station at Fairport, eight miles above the city, at an expense of nearly \$250,000; where the

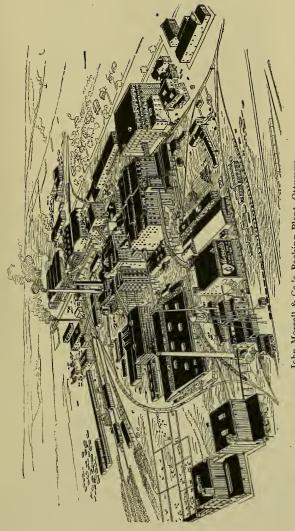


City Park, Ottumwa.

clams are propagated, with the hope of perpetuating the industry in this country. Not only are the buttons manufactured here, but the city boasts of the largest button machinery manufactory in the United States, whose products have found their way into practically all portions of the world.



City Hall, Des Moines.



John Morrell & Co.'s Packing Plant, Ottumwa.



Public Library, Otumwa.

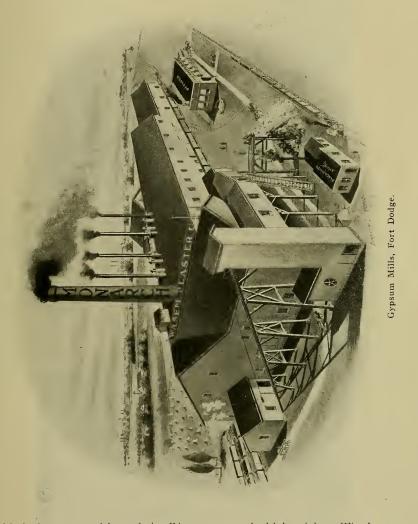
Fort Dodge is called "the Gypsum City." Since one-seventh of all the gypsum mined in the United States is mined at Fort Dodge, with a valuation equal to one-ninth of the entire revenue of the country, it can readily be understood why the name "Gypsum City" is well taken. The largest Wall Plaster Mill in the world has its plant in this city.

Keokuk, "the Power City of the World," is best known as the location of the Greatest Power Plant in the World. While the Keokuk Dam is located in the Mississippi River between Keokuk, Iowa, and Hamilton, Illinois, yet it more properly takes the name of the Iowa city.



Young Women's Christian Association, Ft. Dodge.

While the real object in building this Giant Stop in the Mississippi River was for the development of a large amount of water power in the center of the "Father of Waters" Valley, yet another Navigation feat was thereby accomplished. Heretofore, twelve miles above the dam had been impassable for boats except at high stages of the river, and has been navigated through the government canal and three locks, but now



this is done way with, and the River men are in high spirits. The benefits to the United States will run into several million dollars.

Marshalltown, "the Central City" of "a billion dollar state," and

Mason City, "the World's Cement Center," have been pushing rightful claims to real cities of recent development. Waterloo, "the Cream Separator Center," Charles City, "the Motor-Tractor City," Iowa City,



Plymouth Clay Products Plant, Ft. Dodge.

"the Home of the State University," Ames, the industrial university city, Cedar Falls, "the Teachers' College City of the Middle West," Boone, Oskaloosa, Creston, Centerville, LeMars, Cherokee, Red Oak, Spencer,



Masonic Temple, Ft. Dodge.

Washington, Grinnell, Fort Madison, Atlantic and Algona, and half a hundred other towns might be mentioned with real city pride.

While Iowa stands pre-eminent as an agricultural state there are evi-



Methodist Church, Ft. Dodge.

dences on every hand that she is rapidly coming to the front as a manufacturing state.



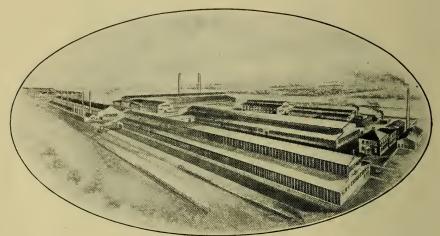
Municipal Building, Ft. Dodge.

PERTINENT FACTS ABOUT IOWA.

Iowa has the greatest Cereal Mill in the world at Cedar Rapids.

Iowa has the greatest Farm Journal Center in the world at Des Moines.

Iowa has the greatest Motor Tractor factory in the world at Charles City.



Hart-Parr Motor Tractor Plant, Charles City.

Iowa has the greatest Cream Separator factory in the world at Waterloo.

Iowa has the greatest Steel Car factory in the world at Bettendorf.

Iowa has the greatest Power Plant in the world at Keokuk.

Iowa has the greatest Calendar factory in the world at Red Oak.

Iowa has the greatest State Fair in the world at Des Moines.

Iowa has the greatest Macaroni factory in the world at Davenport.

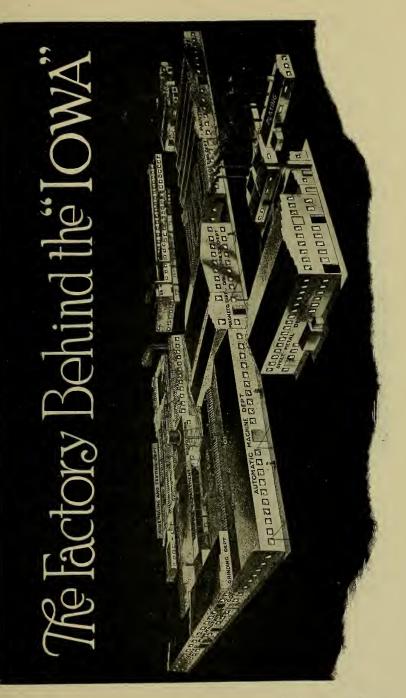
Iowa has the greatest Steel Furnace factory in the world at Marshalltown.

Iowa has the greatest Wall Plaster mill in the world at Fort Dodge. Iowa has the greatest Stump Puller factory in the world at Centerville.

Iowa has the greatest Creamery and Butter factory in the world at Sioux City.

Iowa has the greatest Sash and Door factory west of the Mississippi at Dubuque.

Iowa has the greatest Independent Starch factory in the world at Cedar Rapids.



Iowa has the largest Independent Packing Plants in the world at Ottumwa and Cedar Rapids.

Iowa has the greatest Greenhouse west of the Mississippi river at Council Bluffs.

Iowa has the greatest Furniture factory in the United States at Burlington.

Iowa has the greatest Hay Tool factory west of the Mississippi at Ottumwa.

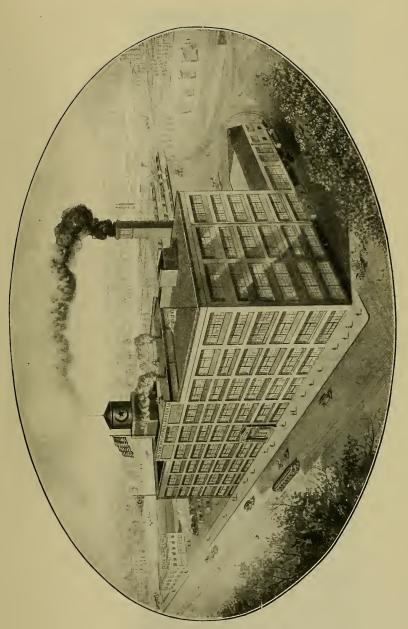


Mississippi River Power Co., Keokuk.

Iowa has the greatest Pearl Button Center in the United States at Muscatine.

Iowa has the greatest Insurance Center west of the Mississippi at Des Moines.

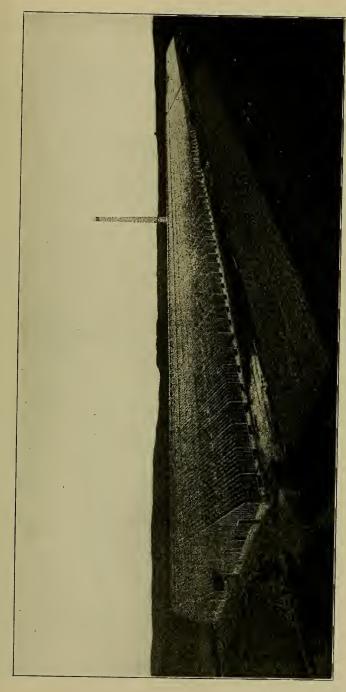
Iowa has the greatest Drain Tile Producing Center in the world at Mason City.



Crescent Macaroni & Cracker Company's Plant, Davenport.



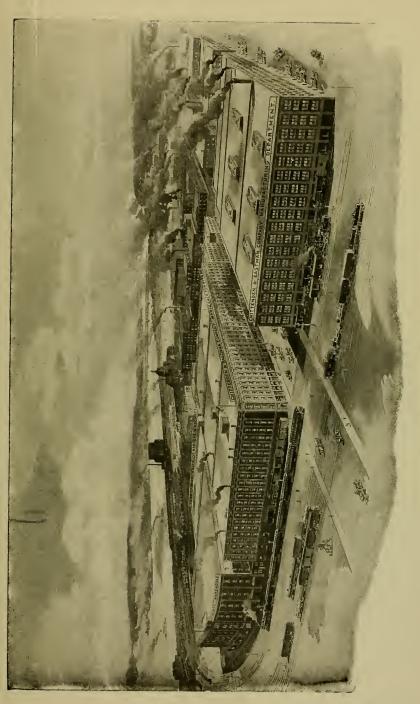
The Bettendorf Steel Car Manufacturing Plant, Bettendorf, Iowa. This is the largest Steel Car Manufacturing plant in the world.



The Wilcox and Son's Greenhouse at Council Bluffs. Seventeen acres of glass space.



The Thos. D. Murphy Company's Plant, Red Oak.



The Chittenden & Eastman Furniture Manufacturing Company, Burlington.

HEADMARKS FOR IOWA.

Iowa stands First in total value of farm products; in combined value of livestock; in value of farm property per farm; in increased value of farm property during decade ending 1910; in percentage of farm land improved; in percentage of total area in farms; in number of automobiles per capita; in value of horses; in value of cattle; in value of hogs; in number of poultry; in value of egg production; in value of farm implements; in tonnage of forage crops; in production of corn; in production of oats; in production of grass seed; and in literacy.

FACTS WORTH KNOWING ABOUT IOWA.

Iowa's honey is worth more than the figs of California.

Iowa's horses are worth more than the cotton crop of any state.

Iowa's wool is worth more than the strawberries of California.

Iowa's cattle are worth more than the tobacco crop of the United States.

Iowa has more bearing apple trees than any two Pacific coast or mountain states.

Iowa's corn crop is worth more than the wheat crop of Canada or Argentine Republic.

Iowa's annual apple crop is worth more than that of any of the Pacific Coast or mountain states.

Iowa's hens lay eggs that are worth more than all the oranges raised in the United States.

Sixteen Iowa Counties raise forage crops worth more than the forage crops of Oklahoma, Montana, Idaho, Wyoming or Texas.

Sixty Iowa Counties raise forage crops worth more than the forage crops in any western state, with all their boasted alfalfa.

Stop! Look! Listen! Of the 289 medals and prizes offered at the Panama-Pacific Exposition for Agricultural products, Iowa carried off 285 of them.

IOWA'S RECORD

AT THE

PANAMA-PACIFIC INTERNATIONAL EXPOSITION.

Woodworth Clum, Secretary Greater Iowa Association, Davenport,
Iowa.

HISTORY OF ORGANIZATION ..

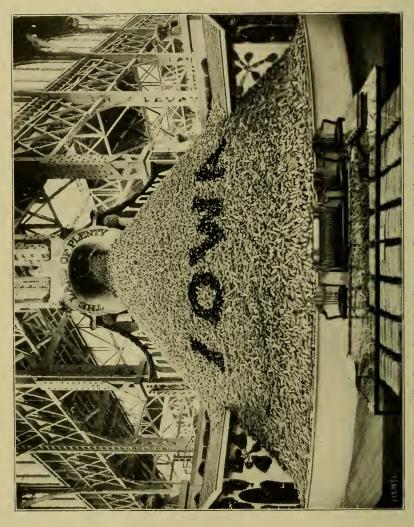
Very soon after the Iowa Legislative session of 1913 came to a close, a group of business men, from all parts of the state, met at Des Moines to discuss plans for Iowa's part in the Panama-Pacific International Exposition. This group of men was designated as The Greater Iowa Association. Upon visiting sixteen of the larger cities of Iowa, contributions amounting to \$105,000 were received, as a guarantee that the state should be represented at the Exposition.

CONSTRUCTION AND FURNISHING OF IOWA BUILDING.

The Greater Iowa Association constructed the Iowa Building and partially furnished it. The Iowa legislature of 1915 appropriated \$75,000 to complete the furnishings of the building and to defray the expenses of the Commission, during the term of the Exposition. This appropriation came too late to permit the Commission to prepare complete exhibits in all departments; therefore, the efforts of the Commission were centered on having Iowa's Agriculture and Animal Husbandry represented.

THE PRIZE EXHIBITION OF CORN.

The great "river of corn," which has gone down into history, as one of the real features of the Exposition, was constructed at a cost of about one-third that of the exhibits of other states which were in competition for the prizes. But that pile of yellow corn, forty-five feet high and sixty-five feet in diameter at the bottom, coming as it did from the "horn of plenty," easily won for Iowa the Grand Prize in collective agriculture. Other than this prize, Iowa was granted a Gold Medal for the best bushel of corn and eight other Gold Medals for the best ten ear samples of the several varieties of corn. Iowa also won a Gold Medal on wheat, one on German millet and two more on oats. Out of the total of two hundred eighty-nine exhibits in agriculture, Iowa was given two hundred eighty-five awards.



IOWA IN THE LIVE STOCK EXHIBITION.

Iowa horses were entered in five of the great draft horse divisions, two of the light horse divisions and in two of the pony divisions. She won the Grand Prize in every one of the draft horse divisions, and in both of the light horse divisions. In the pony division Iowa ranked second. Iowa won the Grand Prizes for Percherons, Belgians, Clydesdales and Morgans.

THE IOWANS KEPT AN OPEN HOUSE.

The Iowa building was visited by approximately 25,000 Iowans during the Exposition period. It was one of twenty-five state buildings on the grounds, and was furnished with more consideration of comfort than any other state building,—or foreign building for that matter. The Iowa Commission realized that weary travelers would be more interested in a big comfortable chair or davenport, on which they could rest, than in any hand carved furniture of the period of Louis XIV. There was no attempt at formality in the Iowa Building. The doorways were open to all,—everybody was welcome almost everywhere.

PERSONNEL OF THE GREATER IOWA ASSOCIATION.

W. W. Marsh, Waterloo
F. D. Steen, West Iiberty
Geo. E. Wilson, Sr., Clinton
Emmet Tinley, Council Bluffs
G. W. French, Davenport
W. G. Haskell, Cedar Rapids
C. D. Cass, Waterloo
Ralph Bolton, Des Moines
C. F. Curtis, Ames
George Haw, Ottumwa
T. A. Black, Sioux City

E. W. Miller, Waterloo, Treasurer.
Woodworth Clum, Davenport, Secretary.

THE GEOLOGY OF IOWA.

JAMES H. LEES, ASSISTANT STATE GEOLOGIST.

The geologic history of Iowa is long and varied, and even though its resultant forms may fail to attain the immense grandeur of the Rockies or the Grand Canyon, in many respects it rivals those regions in intensity of interest to those who study its opened pages, and its beauty spots of rugged charm or quiet loveliness offer perennial pleasure to Nature's children. The earliest chapter of this history takes us far back to the times when much of our continent was under the shallow continental sea, and the records of the time are written in imperishable stone—the Sioux* quartzite, a rock composed entirely of grains of sand cemented so firmly that they have withstood unchanged the storms of a million centuries. In Iowa this rock is exposed only in the section or two forming the northwest corner of the state, but at Sioux Falls



JAMES H. LEES.

it forms the basis of an important quarrying industry. It underlies the whole state and reappears in central Wisconsin. It shows us that even in those far distant days Nature was working by the same plans and methods that she employs today and will employ when another million centuries have passed by. Indeed we might go as much farther into the past as the Sioux quartzite is distant from us and still find the same processes and forces at work as are busy about us now.

^{*}It should be explained that many geological formations are named from localities where they were first studied or are well exposed. Thus, the Sioux quartzite is named from Big Sioux river, along which it outcrops, near Sioux Falls, South Dakota. Other names will be explained in the list of words found at the close of this article.

DIAGRAM SHOWING SUCCESSION OF IOWA ROCKS.

Group	System	Series	Stage	Thickness
		Recent		
			Wisconsin	+08-0
			Iowan	
Cenozoic	Quaternary	Pleistocene	Sangamon Illinoian	0-30+
	,		Yarmouth	+001-0
			Kansan Aftonian	+00-200+
			Nebraskan	0-30+
	Tertiary		Long Erosion Interval	
	Cretaceous		Colorado	150
		Upper Cretaceous	Dakota	100
Mesozoic		Lower Cretaceous		
	Jurassic Triassic		Long Erosion Interval	
	Permian		Fort Dodge	09
			Erosion Interval	900
		Pennsylvanian	Missouri Des Moines	750
	Carboniferous		Erosion Interval	84
		Mississippian	Osage .	265
			Kinderhook	130
	1	Upper Devonian	Lime Creek, etc.	120
	Devonian	Middle Devonian	Cedar Valley Wapsipinicon	100
Paleozoic		Lower Devonian	Erosion Interval	

DIAGRAM SHOWING SUCCESSION OF IOWA ROCKS.—Continued.

	Thickness		120	200	440	100				h, etc. 50		1000+		100+	
	Stage		Gower Hopkinton	Maquoketa	Galena-Platteville	St. Peter	Prairie du Chien New Richmond	Oneota	Jordan	St. Croix St. Lawrence Dresbach, etc.		Long Erosion Interval		Sioux Quartzite	
	Series	Cayugan	Niagaran	Cincinnatian	Mohawkian		i	Canadian				**************************************	Acadian Georgian	Keweenawan	Huronian
	System		Silurian	Ordovician								Cambrian			A 1
	Group													T. C.	Proterozolc

Long after the formation of the Sioux quartzite, after the deposition and erosion of we know not what series of rocks, the next formation of the Iowa geologic succession, the St. Croix or Potsdam sandstone was laid down on the shallow sea-bottom. This sandstone belongs to the Cambrian system and represents the earliest deposits in Iowa of the Paleozoic group of rocks. It is a full thousand feet thick and is one of Iowa's most reliable and widespread artesian water strata. It outcrops in Allamakee and Clayton counties, and near the state line forms 400 feet of the massive canyon wall of the Mississippi. At North McGregor it disappears beneath river level and is succeeded by the Oneota dolomite, the lowest member of the Ordovician system. This dolomite, heavy-bedded, resistant to the weather, standing in bold escarpments, caps the river bluffs and makes possible the beautiful scenery of "The Switzerland of Iowa." It also supplies one of the best quarry stones of the state, were it only more accessible. Over it lies the New Richmond sandstone, also a valuable water-stratum, although only about thirty feet thick. Then comes another dolomite, the Shakopee, and following this the St. Peter sandstone, next to the St. Croix the best water-bearing stratum in the state. It is from sixty to one hundred feet in thickness and at McGregor, where its full thickness is shown, it forms the marvelous Pictured Rocks. Another formation, the Platteville limestones and shales, follows, and then succeeds one of Iowa's most interesting and important rock-stages, the Galena; which not only furnishes excellent building stone, but also is the source of nearly all of Iowa's lead and zinc ores. Thousands of tons have been removed from the mines of Dubuque, a city made famous first by the activities of its founder, whose monument now crowns the bluff overlooking the great river which flows at its feet. The close of the Ordovician period was marked by the deposition of the Maquoketa shales, whose 200 feet thickness afford unlimited supplies of material for clay-working industries, such as brick, drain tile, pottery and similar wares.

We may pause here to explain that most of the rocks in the geologic section of Iowa were formed in relatively shallow waters. The sand-stones, for instance, were laid down first as loose sands near the ocean shores, where waves and currents washed them about. The shales and clays are formed from muds and silts, which were lighter and hence were carried a little farther seaward. The limestones were formed far from land, beneath the reach of waves, and owe their origin partly to the action of lime-forming animals and plants, partly to deposition of lime from the water. In some cases the lime has been replaced, more or less, by magnesia, in which case the rock becomes a dolomite. None of these, however, belong to the abyssmal depths. The continents have

never changed places with the great ocean basins. Although they have been often covered by oceanic waters they have retained essentially their forms and positions since they first developed on the growing earth.

The Silurian period succeeded the Ordovician and it is represented in Iowa by the Niagaran dolomite, the best quarry stone formation of the state. The great quarries of Cedar Valley, Le Claire and Anamosa are opened in these strata, which attain a thickness of over 300 feet and stretch from Davenport northwest into Fayette county.

The next period, the Devonian, is divided into Upper, Middle and Lower, but the Lower is not represented in the Mississippi Valley. The Middle Devonian deposits are limestones, some of which furnish excellent building stone, while others, notably the Cedar Valley limestone at Mason City, are so pure that they make excellent Portland cement and supply the two immense factories at that city. The Lime Creek shales of the Upper Devonian, which are well developed at Mason City, furnish in limitless quantities the silica and alumina which are needed to combine with the lime from the limestone to make a proper Portland cement. Because of the abundance and purity of these shales Mason City has become the largest drain tile manufacturing center in the world.



Mississippi River Bluffs Below Lansing.

With the opening of Carboniferous time there was begun the deposition of an extensive body of limestone and shale, the Mississippian series. The shales are best developed in southern Iowa, and in Missouri, where they are used in cement making. In central and northern Iowa the limestones are predominant. The lower part of these, the Kinderhook, furnished the stone for the magnificent Historical Building at Des Moines. During the later part of Mississippian time the sea retreated and left Iowa exposed to all the elements. Deep valleys were cut into the rocks and the surface was carved and scored into great irregularity.



"Castle Rock" near the Turkey River.

When the sea again overspread the state, during Des Moines time, extensive coastal swamps made conditions favorable for the deposition of great bodies of coal. At one time these doubtless extended beyond the Mississippi river to unite with the coal fields of Illinois. At present the productive district is confined mostly to Des Moines and Skunk

valleys. The coals and associated shales make the Des Moines stage the most important of the bed rock series of the state. In 1914 the coal and clay wares produced from these strata were valued at over \$15,000,000. A series of limestones and shales called the Missouri stage closed the Carboniferous period.

In the vicinity of Fort Dodge is a heavy bed of gyspum, formed, apparently, in a long troughlike valley. It is thought to have been deposited from a shut-in arm of the sea during Permian time. It is thirty feet thick in places and covers probably fifty square miles. From it are made immense quantities of wall plaster, Plaster of Paris, and similar wares.

For many years Iowa was dry land, but finally a bed of sandstone, the Dakota, was laid down, perhaps in lake beds. This is the deposit which is so abundantly water-bearing on the Great Plains. Afterwards the sea overspread western Iowa and the Colorado shales and chalky limestones were formed on its bottom. These are important as a source of cement and clay ware and are extensively used. With the close of Cretaceous times the sea left the Iowa region for the last time.

For a long time again Iowa was dry land but gradually climatic changes occurred which led to the formation of great sheets of snow and ice in the great Canadian northland. These attained such size and thickness that of their own weight they gradually pushed out their edges, burying valley and plain until they had covered North America from the Atlantic to the Pacific and from the Arctic to the Missouri and the Ohio. At least five times did these continental glaciers advance and retreat and each time the ice spread out a sheet of clay, gravel, sand and bowlders as glacial drift. Each one of these five glaciers stretched into or across Iowa, so that this state offers the best field in the Union for the study of glacial phenomena. The glacial epoch is known as the Pleistocene, and the different glaciers, and also the deposits of glacial drift left by them are called the Nebraskan, the Kansan, the Illinoian, the Iowan, and the Wisconsin, the last of all. These are separated by interglacial stages, known as Aftonian, Yarmouth, Sangamon and Peorian, as is shown in the section on page 2.

The Nebraskan drift is not exposed naturally in Iowa, but was entirely concealed by the Kansan, which covered the entire state except a small area in northeastern Iowa. The Illinoian occupied a small area in southeastern Iowa, the Iowan covered a few northeastern counties, and the Wisconsin formed a lobe extending down the central part of the state to Des Moines.



The Palisades, Cedar River.

The Kansan drift area is very much eroded and cut up by streams; very little level land is left, except on the divides; all is well drained. On the contrary drainage has scarcely begun to affect the Wisconsin drift area, so recently was it uncovered by the melting away of the glacier. Ponds and sloughs are very common and in its rough hilly marginal areas lie beautiful lakes—Clear Lake, Okoboji Lakes, Spirit Lake, and many others. Iowa owes her richly productive soils almost entirely to the materials brought down by these glaciers. Without them we would have such soils as those south of the Missouri—residual soils, which are the product of rock decay in place. Iowa would not be the richest agricultural land in the world, were it not for the great glaciers and their grinding, pushing, thrusting work in the years of long ago.

The foregoing sketch will have shown how dependent we all are upon the geologic history and geologic conditions of our state. Not only the miner, the quarryman and the brickmaker, but the farmer, the gardener and ultimately the city dweller as well, draw from the geologic past their sustenance and their livelihood.

TABLE OF MEANING OF WORDS.

Acadian, named from Acadia, an older name for Nova Scotia.

Aftonian, named from Afton Junction, Iowa.

Algonkian, named from the Algonquins, a large group of Indians of eastern United States and Canada.

Cambrian, from Cambria, the Latin name for Wales.

Canadian, named from the country of Canada.

Carboniferous, named from the large amount of coal (carbon) which the rocks contain.

Cayugan, named from Cayuga lake, New York.

Cedar Valley, named from the Cedar river valley, Iowa.

Cenozoic, recent life; life most like that of today.

Cincinnatian, named from Cincinnati, Ohio.

Colorado, named from the state of Colorado.

Cretaceous, chalk-bearing, from creta, chalk. The name given to the chalk cliffs of the English Channel.

Dakota, named from the territory of Dakota.

Des Moines, named from the Des Moines valley.

Devonian, named from Devonshire, England.

Dolomite, a rock composed of lime carbonate and magnesium carbonate.

Dresbach, named from the town of Dresbach, Minnesota.

Fort Dodge, named from the city of Fort Dodge, Iowa.

Galena, named from Galena, Illinois.

Georgian, named from the village of Georgia, Vermont.

Gower, named from Gower township, Cedar county, Iowa.

Gypsum, a rock composed of sulphate of lime with water.

Hopkinton, named from the village of Hopkinton, Iowa.

Huronian, named from Lake Huron.

Illinoian, named from the state of Illinois.

Iowan, named from the state of Iowa.

Jordan, named from the village of Jordan, Minnesota.

Jurassic, named from the Jura mountains, Europe.

Kansan, named from the state of Kansas.

Keweenawan, named from Keweenaw peninsula, Michigan, in Lake Superior.

Kinderhook, named from the village of Kinderhook, Illinois.

Lime Creek, named from Lime creek, Cerro Gordo county, Iowa.

Maquoketa, named from Little Maquoketa river, Dubuque county, Iowa.

Mesozoic, middle life; life transitional from old forms to recent.

Mississippian, named from the Mississippi valley, where the rocks are best developed.

Missouri, named from the state of Missouri.

Mohawkian, named from Mohawk river, New York.

Nebraskan, named from the state of Nebraska.

New Richmond, named from the town of New Richmond, Wisconson.

Niagaran, named from Niagara river, New York.

Oneota, named from Oneota, or Upper Iowa river, Iowa.

Ordovician, named from Ordovices, a people of ancient Wales.

Osage, named from Osage river, Missouri.

Paleozoic, ancient life; life forms very old.

Pennsylvanian, named from the state of Pennsylvania.

Peorian, named from the city of Peoria, Illinois.

Permian, named from the government of Perm, Russia.

Platteville, named from the village of Platteville, Wisconsin.

Pleistocene, most recent; life forms most nearly like those of today.

Potsdamian, named from Potsdam, New York.

Prairie du Chien, named from the town of Prairie du Chien, Wisconsin.

Proterozoic, earlier life; life forms quite simple.

Quartzite, a rock composed of sand grains cemented by silica.

Quaternary, the fourth, a remnant of the time when all rocks were

grouped by geologists into Primary, Secondary, Tertiary and Quaternary.

St. Croix, named from St. Croix river, between Minnesota and Wisconsin.

St. Lawrence, named from the village of St. Lawrence, Minnesota. Saint Louis, named from St. Louis, Missouri.

St. Peter, named from St. Peter river, now called Minnesota river. Sangamon, named from the town of Sangamon, Illinois.

Shakopee, named from the town of Shakopee, Minnesota.

Shale, a finely stratified rock formed by the solidification of mud and silt.

Silurian, named from Silures, a people of ancient Wales.

Sioux Quartzite, named from Big Sioux river, between Iowa and South Dakota.

Tertiary, the third; see Quaternary.

Triassic, so called from its three-fold division in Germany.

Wapsipinicon, named from Wapsipinicon river, Iowa.

Wisconsin, named from the state of Wisconsin.

Yarmouth, named from the village of Yarmouth, Iowa.

THE DEVELOPMENT OF THE COAL INDUSTRY IN IOWA.

(Contributed by the English Department of the Ottumwa High School.)

Iowa's greatest wealth lies not only in the culture of her rich soil, but also in the development of the geological formations underlying that soil, of which the chief product is coal.

Iowa's rank among all the states of the nation in 1914 was tenth in output and ninth in value. Considering the states west of the Mississippi, she is second in both output and value. The distinction of being first of the western states from 1840 to 1873 was held by Missouri. Iowa then came to the front, where she remained until 1909 when Colorado surpassed her. Colorado still leads, Iowa following in the second place with the production of 7,614,143 tons in 1915, with a value of \$13,577,608.

The state census for 1910 shows the following facts concerning coal mining: that \$13,877,781 are realized from all the mining industries of Iowa, and that 91.4 per cent come directly from the mining of bituminous coal; also that out of the 19,904 people employed in general mining, 92.1 per cent are engaged in coal mines. Another inter-

esting fact is that one-fourth the mining wage earners are employed in six large mines which give work to more than five hundred each. In 1902, the bituminous industry was valued at \$8,660,287 and in 1910 was placed at \$12,682,106, making an increase of 46.6 per cent.

The coal beds of Iowa are lenticular in arrangement and the more important ones vary from thirty inches to seven feet in thickness, with four feet as the average. The coal fields are nearly all rather local, many covering less than a few hundred acres in area.

Iowa is the northernmost extension of the great interior coal fields of the United States, with only the southern third of the state occupied by it. The coal belt extends over twenty thousand square miles and runs from the northwest to the southeast, following the Des Moines river from Fort Dodge to Keokuk and extending west through the southern counties.

The geological name for the most important coal bearing beds of Iowa is the Des Moines Stage or the Lower Coal Measures. These beds are divided into three general divisions known as the Cherokee, Appanoose, and Pleasanton. However, there is no clear dividing line but the divisions are derived from certain characteristics of each formation.

From eighty to ninety per cent of our coal is obtained from the Cherokee division which is in the very center of the local region and follows the Des Moines River from Webster County to Van Buren County, including Boone, Polk, Jasper, Marion, Mahaska, Wapello, Monroe, Lucas and Jefferson counties. An important division economically is the Appanoose so called from Appanoose county and besides including the counties of Warren, Guthrie, Dallas, Madison and Wayne. The chief coal seam of this division is the Mystic Seam which underlies 1,500 square miles in Appanoose and Wayne Counties. It is of regular structure and although only thirty inches thick, its persistency enables it to be extensively and easily mined.

The Pleasanton is the upper division of the Des Moines stage and is not of much importance in Iowa. Above it are the strata of the Missouri stage, or the Upper Coal Measures which include Page, Adams, Montgomery, Mills, Fremont and Taylor counties, and contain a few thin seams of coal, the most important of which is the Nodaway, about sixteen inches thick.

The majority of the mines in Iowa work quite near the surface, the deepest shaft going 340 feet. The original coal supply of Iowa was 29,160,000,000 tons, while the coal exhausted between 1840 and the end of 1915 was approximately 300,000,000 tons including a waste of half a ton for each ton mined. According to the rate of production

for 1915, which was 7,614,143 tons, Professor George F. Kay, state geologist, says that the coal still available in Iowa is about 28,863,-000,000 ton, and that there will be coal for at least 2500 years to come.

THE CEREAL INDUSTRY IN IOWA.

J. HARRY SHEPPARD, EDITOR-IN-CHIEF, "THE PULSE," CEDAR RAPIDS, IOWA, HIGH SCHOOL.

Grain. What a world of history, of economics, of human toil and struggling is embodied in this little word! Its evolution is the evolution of civilization. It is the keynote of agriculture. To it is due the cultivation of millions of acres of fertile fields and plains. From the great tracts in the remote districts of the Argentine Republic, to the still primeval farms on the Russian steppes; from the little farms of Burmah, of Mysore and of the Sind, to the fertile ranches of the San Joaquin valley in California; from the Dakotas; from Nebraska, Iowa, Kansas and Illinois; from every district in the world that possesses even the fewest acres of fertile land, the soil is plowed, sown and tenderly cared for that it may give forth its precious crops of grain.

In Iowa, the watchword of the state has always been "Grain." The name of Iowa conjures up pictures of fields of corn, broad acres of waving oats and wheat, and extensive tracts of rye and barley. Nearly half of the area of Iowa is given over to the annual production of gigantic crops of these staple grains. Twenty-one million acres are annually cultivated in developing Iowa's greatest industry, the harvesting of her grain crop. Two hundred and fifty millions of dollars are received yearly as a payment for the grain that is raised on the fertile acres of Iowa. Through the grains of Iowa more than a million and a quarter of her inhabitants earn a livelihood.

Foremost in Iowa's grain production comes corn. It is corn that claims over a third of the cultivated acres in the state; it is corn from which an annual revenue of nearly two hundred million dollars is derived. It is through the tilling of nine million acres that the Iowa corn crop amounts yearly to nearly three billion and a half bushels. A somewhat distant second to the corn production of Iowa is that of oats. Five million acres of oats produce an annual yield of over one and one-half billion bushels, which, in turn, enrich the people of Iowa by over sixty million dollars annually. Next comes the wheat crop which takes up nearly eight million acres, and in return places in the hands of the farmers about fifteen million bushels from which they realize an asset of

nearly the same number of millions of dollars. In addition to these facts, we find ten million bushels of barley, with a value of five million dollars, being produced on four hundred thousand acres. Not quite a million dollars is realized yearly from the more than a million bushels of rye raised on the seventy thousand acres devoted to the growing of this grain.

Thus we find that Iowa, a state which contains but one sixty-fourth of the area of the United States, produces yearly crops valued at five sixty-fourths of the crops of all kinds in the United States. We see that Iowa, according to the figures of the United States Department of Agriculture for 1914, in the value of all her crops, heads the states of the Union with the sum of three hundred and fifty-one million dollars.

Iowa's standing shows her with a gain of 7.2% over 1913 and a gain of 23.6% over the average for the past five years.

It is difficult for the average person to grasp myriads of figures much less store them in his mind for knowledge of his own state and for reference. It is hard to conceive just what a million bushels of grain is, or the extent of a million acres of land, or the purchasing power of several million dollars. Suffice it to say, then, that the following are worth while, practical facts that every Iowan should know about the grain production of his state:

One-half of the area of Iowa is devoted to the cultivation of grain.

One and one-quarter million of the two and one-quarter million people in Iowa earn a livelihood through the state grain production.

The grains of Iowa sell for over \$250,000,000 annually.

One-half of the corn of the world is produced in one section of the United States, of which Iowa is practically the center.

Every day there are drawn into the city of Cedar Rapids, Iowa, sixty freight cars, each loaded with an average of eighty thousand pounds of Iowa grains. Every day there are taken away from this same city eighty thousand pounds of grain. But not until they have been completely changed into finished products do these grains leave the plants. They are subjected to a multitude of processes—baked, boiled and even shot from guns—they appear ready again to be whirled away to the hungry people. The fruits of the richest acres of the world have been changed by the genius of man until they appear as scores of different food products, awaiting the call of His Majesty, the American Gentleman.

Of the sixty cars that are unloaded daily, manufactured, and again shipped out to supply a large portion of the United States, twenty-six are corn, twenty-four are oats, and ten are barley, wheat and by-products. These cars bring into Cedar Rapids the grain with which the factories of that city do 35% of the cereal manufacturing of the United States.

It is practically an impossibility to trace the manufacturing processes of any variety of grain into the many different brands of finished products. Oats, to a great degree, are manufactured into the well known brands of "Quaker Oats" and "National Oats." The manufacturing concerns that possess world wide reputations, because of these widely used products, have large Iowa plants at Cedar Rapids and Fort Dodge. Puffed rice and puffed wheat, two of the greatly advertised cereals of the country, are products of these plants. In addition to corn meal, buckwheat flour and other cereals, the many by-products of the cereal plants of Iowa receive an important place in the daily outputs of these concerns.

It is a close estimate that a bushel of 32 pounds of raw material reduces into 22 pounds of finished cereal product. In other words, a little over 69% of a bushed of oats, or any other grain, is turned into a table cereal. Of the remaining 31%, 281/2% is devoted to the manufacture of feed. It is due to this fact that one of the largest cereal concerns of Iowa turns out no less than one thousand tons daily of what is called feed. The feed thus produced is sold in the immediate vicinity of the mills of the state; and, although the price realized from it is not very high, there is, in most cases, such a large quantity sold as to make the production of this important by-product extremely profitable. Other brands of feed supplies are manufactured separately out of raw products, brought into the mills especially for this purpose. Alfalfa meal, millet seed and sunflower seed are included in the manufacturing of these different feeds. The remaining 11/2% of every bushel of grain that is brought into the average Iowa factory for manufacture is what is termed "invisible waste." There is this per cent of the grain that cannot be definitely accounted for. Part of it is lost, part floats from the buildings in the form of white dust; there are a thousand different ways in which this 11/2% disappears and puzzles the heads of these great industries.

The most difficult task of the manager of the average Iowa cereal mill is to keep the machinery, under his care, in the condition necessary to produce its highest capacity at all times. Most of the larger factories have to run parts of their mills the entire twenty-four hours of the day, to be able to fill the incoming orders. Through one of the largest mills of the state 80,000 bushels of the different grains are daily made ready for retail distribution to the public.

In the year 1915, the grain from ten thousand cars received at one factory, was manufactured into more than forty different products, and was shipped out again to practically every corner of the American continent. Due to the fact that the finished product is nearly always shipped in cartons, only forty thousands pounds can be loaded in one car; thus making it require about twenty thousands freight cars to remove these

manufactured grains from the factories. In addition, therefore, to the factory's cars for shipping grain, it requires eight hundred freight cars of boxes, sacks, cartons, and other supplies, making the total cars carrying goods into and out of this large Iowa cereal plant amount to nearly 40,000 each year.

Statistics from this same factory show that oats are manufactured into breakfast foods at that plant, at the almost unbelievable rate of a million bushels a month.

Iowa also possesses at Cedar Rapids, the largest independent starch works in the world. Six hundred and seventy-five bushels of corn are fed every hour to the processes that convert Iowa's staple grain into starch. For twenty-four hours out of every day this concern manufactures starch at that rate, requiring for its work over six million bushels of corn annually.

The greater part of the produce of the cereal plants of lowa is used for domestic sale. A small part, about $2\frac{1}{2}\%$, is sent to eastern India, Hindustan and even into the Oriental countries, where the Chinese and the Japanese are developing such an appetite for cereal foods, that their desires are being felt on this side of the globe. Our Iowa cereal mills are hourly grinding meal for these most recent converts to American foodstuffs.

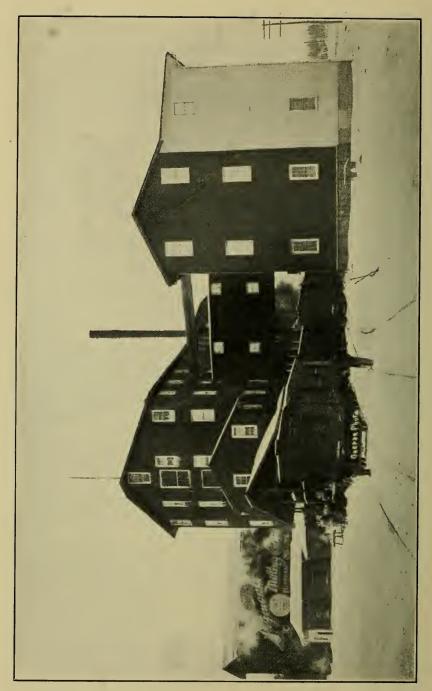
Thus it is, that the Iowa cereal mills, which are the very pulse of Iowa living, make themselves felt to the most remote corners of the world. It gives Iowans a feeling of pride to realize that it is their industries and their fields that reach out as one of the greatest factors to the world's food supply, the nutritious produce of our pulsating Iowa Cereal Mills.

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CEREAL MILLS.

One of the largest Cereal Mills in the state is located at LeMars. The daily capacity of this mill is 600 barrels of flour, 700 barrels of corn products and 200 barrels of other cereals.

The Corn products plant is probably one of the most modern and efficient in existence. A Morris drier, of 3,000 bushels daily capacity, puts all corn in condition before being milled, and five Cutler driers are employed to re-dry the finished product. There are also the necessary appliances for steaming, degerminating and hulling the corn before being milled. There are two separate plants, so yellow and white corn can be milled at the same time. The finished products produced are Yellow and White Pearl Meal, Yellow and White Granulated Meal, Corn Flour, Grits, Hominy Grits and Pearl Hominy.



The cereals manufactured are Rye Flour, Rye Meal; Cracked Rye, Graham Flour, Entire Wheat Flour and Buckwheat Flour.

An important branch of the business is that of feed production. These consist of Cracked Corn, Corn and Oats feeds ground in various proportions to suit the trade, also mixed grains for chicken feeds. Also, the by-products of the flour mill consisting of Bran, Shorts, Flour, Middlings and Red Dog, and the by-product of the corn mill called Hominy Feed. This last feed is especially rich in fat and protein and is one of the best feeds produced for milch cows. Practically all the Hominy Feed produced is exported to Germany. The total feed production is six cars per day.

Another celebrated cereal mill is located in the city of Davenport. Here the daily capacity is 1,700 barrels. This mill runs day and night and has a storage capacity of 700,000 bushels. At this milling plant the grain is stored in steel tanks, while the working machinery is operated in what is known as the "Tunnel System," under ground. This plant employes 175 persons and operates more than 300 days, of 24 hours each, each year. The products of this plant are shipped east, south and west, to various sections of the United States, and many of the products reach European countries, the British West Indies and several countries of South America.

The cities of Des Moines, Waterloo, Spencer and Alton have important milling plants and their output finds a ready sale in the best households of our own state.

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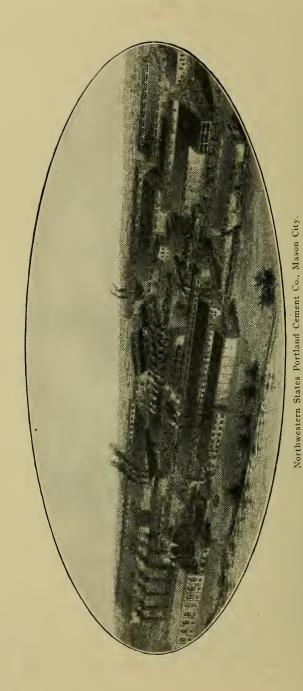
THE CLAY PRODUCTS INDUSTRY IN IOWA.

BUILDING AND PAVING BRICK AND DRAIN TILE.

C. B. Platt, Van Meter, Iowa.

Burned clay, one of the most enduring materials, and when manufactured is designated as clay products. It plays a most important part in industry and in the world's material improvement.

Burned clay products are called upon to withstand the most severe tests of Nature, in serving man's purpose and they do not fail. The uses to which clay products are put are as varied as man's experiences. We find some of these products stored and sold along railway tracks with lumber, coal and other rough commodities, and some displaying their beauty in creditable rivalry with gems and other works of art, in some of the world's finest establishments.



-PAGE ONE HUNDRED THIRTY

The word CLAY embraces a great variety of combinations in which KAOLINITE, or pure clay, is found mixed with other substances, widely distributed over the earth's surface. Pure clay is white when burned. Varying mixtures of minerals change its color and effect other varying results which determine the adaptability of a given clay for a certain use. Pure clay is comparatively rare while ordinary clays and comparatively pure clays are common. It has often been remarked, by those who do not quite fully comprehend, to what extent a slight variation in the make-up of clays effects a practical change in their value as raw material, from which to manufacture different clay products, that it is strange that a certain State or locality seems to monopolize the trade in the more valuable clay products. While location, with respect to the center of population, often has a great influence, the reason which applies in most instances is; the clay is not exactly suited for any but the commoner varieties of clay products.

Clay products manufacture is the most important of Iowa's industries. Iowa's clay plants are among the best in the United States and the product of these plants is of the highest quality standard in the lines represented.

With very few exceptions, the early history of Iowa's clay products manufacture has to do with the manufacture of common brick and drain tile, made from the glacial drift clays so widely distributed over the state. These clays, though varying slightly, usually contain quantities of lime pebbles and also present great difficulties in manufacture, chiefly with respect to drying the molded ware. Principally, on account of the difficulty in drying these clays, the early development of the industry in Iowa called into existence a great number of small factories widely distributed. These were generally designated as brick "yards." Within a comparatively recent time, thirty years perhaps, the development of clay-working machinery made it possible to utilize the hard clays or shales, which were commonly known as soap-stone. Shale clays, when worked, require heavy machinery and much power. The product is much stronger than that made from the drift clays, and tempered shales can be formed into larger molded bodies and more intricate shapes than the drift clays. Shale clays can be dried, in artificial dryers, in twenty-four hours, without injury and they will vitrify (become impervious to moisture and very hard) without excessive shrinkage or loss of molded shape. It naturally follows since shale clays can be much more economically manufactured into clay products than can the drift clays, and since the product is stronger, that the original small plants working the drift clays are gradually disappearing. Twenty-five years ago there were over 350 clay products plants in Iowa and today

there are less than 170. There were fifteen less clay plants in Iowa in 1914 than in 1913. The output, on the other hand, has been multiplied several times over, increasing 15 % in 1914, over 1913.

Iowa now produces over six and a half million dollars worth of clay products each year and ranks seventh in clay producing states.

Iowa is at this time, and has been for several years, the leading State in the production of drain tile. This product constitutes 50% of the total clay products production of the State.

We have in Iowa—at Mason City—the Greatest Drain Tile producing Center in the world. The Mason City District produces one-third of the tile made in the State.

Though Iowa does not manufacture what is termed the finer grades of clay products, we have in the State some of the most modern plants in the country and manufacture face-brick, roofing tile, fire-proofing, sewer-pipe, paving brick and hollow building tile—all of the best.

Iowa's growth in wealth is more directly due to drain tile than to any other one thing. Tile drainage has redeemed the swamp areas of northern Iowa and placed them high in the scale with the great garden spots of the world.

To gain a comprehensive idea of the magnitude of drainage operations in Iowa, one needs no more convincingly graphic comparison than that furnished by Dean A. Marston of the Engineering College at Ames; that the work under way and directly contemplated will require the expenditure of a greater sum than was required to construct the Panama Canal. And this is being done without comment. GREAT indeed is IOWA.

INFLUENCE OF SEWER PIPE AND DRAIN TILE IN THE DEVELOPMENT OF THE STATE OF IOWA.

J. L. Johnson, Fort Dodge, Iowa.

The values of city properties and farm lands of the state of Iowa today are several times what they were fifteen years ago. This of itself, of course, is not at all surprising, as the same may be truthfully said of many of the states of the Union. Among the many things that contributed largely to the progress of the state, we must admit that Sewer Pipe and Drain Tile have shared in the honors.

A few years ago the larger cities of the state considered it a great hardship to install a sanitary sewer on account of the cost. This year and during 1915, we find numerous villages of one thousand and less population planning and putting in sewers. We recall one sewer that was installed, late last season, in a town of about 800 people, the cost not less than \$25.00 for each man, woman, and child in the village.

This proves two things: that the people are becoming awakened to the necessity of sanitation for the sake of health, and that they can afford to pay for anything that tends to better health and increased property values. Vitrified Sewer Pipe used in Sanitary Sewers is a guarantee against polluted water taken from the earth for drinking purposes. Typhoid fever epidemics have often been traced to improperly constructed sewers; that is, sewers built of materials that were easily penetrated by acids that always abound in sewage. Too much care cannot be exercised in improvements of this kind in cities and towns with a healthy growth. The labor expense of a sewer system is approximately four-fifths of the entire expense, therefore, the material used should be selected with the idea of permanence. If the material is not permanent and has to be replaced, the expense of replacing same will be four times the price of it.

It is very often the case that proper consideration is not given to the size of pipe used in the sewer system. The Engineer, no doubt, at the suggestion of the councils or committees employing him, plans the size to meet only the present needs of the city or municipality, and does not take into consideration the fact that the city will possibly double in population in a very few years, and the system as planned and installed will be entirely inadequate for the city in five years or less. This will necessitate taking up the old improvement or the outlet portion at least and the installing of a larger one. This feature of sewer construction, we feel, should always be fully considered by communities that are considering the installation of a satisfactory sewer system.

Sewer Pipe used in the construction of sewers directly benefits more people than drain tile for farm drains; but the latter, which we will take up at this time, enhances the value of more acres, and therefore, benefits the rural or farming districts to a much greater extent.

Some ten years ago there were numberless acres under water in the heart of Iowa that were unproductive of anything except ducks. A few of the more enterprising residents who had hailed from Illinois and other states where drainage had been successfully carried on, conceived the idea of a state drainage law, and after considerable effort, expense, and trouble managed to get the same through the Iowa Legislature. Activity along drainage lines became apparent immediately; and twelve or fifteen counties in central and northern Iowa have been the battle ground of drainage work ever since. No line of business in interior Iowa has received anything like the attention this drainage work has received. Drainage districts are numbered consecutively as they are established and in some counties they number well over the two-hundred mark. Our own county, Webster, has expended to exceed two million dollars

along this line, and everybody agrees that it has been money well spent and that the improvements in most cases paid for themselves the first three years and have been paying large dividends ever since. Our county, is no exception, as there are several other counties near and adjoining that have spent as much or more along this line.

Large factories have sprung up to supply the demand in addition to the numerous factories making the unglazed tile. There are six factories with approximately one hundred and thirty kilns, making the large vitrified salt-glazed material.

One mistake may well be charged to the early drainage work. In numerous instances large outlets have been made by constructing an open ditch with its unsightly spoil banks and numerous acres rendered untilable as a result. A few years ago this feature could be excused in part, on account of the interested land owners being unable to procure large tile to be used instead of an open ditch and also because farm land was less valuable then than at this time; but now that farm lands are soaring in value and have reached the two hundred dollar mark and better, the introduction of Vitrified Clay Segment Block within the last two years which can be used in building outlets from 36" to 108" in diameter, there is no excuse for an open ditch through these farms. An open ditch is also very expensive as they must be cleaned out every three or four years and must be spanned by numerous bridges, fences, etc., for the convenience of those whose farms are traversed by them and we believe it is only a matter of a very few years when they will be relics of the past in Iowa.

Drains like Sewers when properly constructed, are conducive to good health of the community as they dispose of all the stagnant slough water which breeds both malaria and mosquitoes. The last year being so rainy has proven that numbers of county drains in the state, in an effort to economize, have been built too small. This turns out to be false economy. Like sewers they should be planned and built large enough to give outlet to all above them in the water shed without any other possible outlet, and to give 100% efficiency in the rainiest season; and when so planned, should use, in order to make the drain permanent, a material that will stand until time immemorial, and we do not know of a substitute for Vitrified glazed Drain Tile and Segment Block for this business.

CEMENT IN IOWA PUBLIC SCHOOLS

Contributed for the Iowa Day Bulletin, by Association of Portland Cement Manufacturers.

Sanitary conditions on Iowa farms are being transformed and improved by the very simple method of turning the Iowa boy's play from one channel into another,—from mud forts and mud dams to construction with concrete. It is a very simple and very logical idea; so simple, in fact, that the wonder is why we have been so long in making the application.

Scores of schools are now taking up concrete in vocational training. One need figure but little to see what the effect of this interest will be on the welfare of a community. As the younger generations are taught the advantages of building more permanent and sanitary structures, they will become great factors in all betterment movements hereafter.

Numerous cases can be cited where courses in concrete have sown the seed that has worked wonders in improving the homes in the vicinity. Only recently, an instance came to light of a boy, who, through interest in concrete work in school, had accumulated an extensive stock of bulletins and pamphlets on the subject. He had taken these home and applied practically his new-found knowledge towards the rejuvenating of the old farm home. The wooden steps at the back door were rotting away and needed replacement. The father knew nothing of concrete, but the boy had argued him into believing that this material should be used in replacing the wooden steps.

The boy won his point and the steps were built. He went farther and built a concrete walk from the steps to the barn. When this youthful enthusiast, in concrete construction, reached the barn, he replaced the old wooden hog trough with a trough of concrete. He knew that it could be kept sanitary and that it would not rot; he remembered a trough that he had helped to build in the school.

At this juncture in promoting the uses of concrete on the farm, the boy found it necessary to convince his father that cement would cost less than the lumber required to do the same work. In this argument he was successful. He did, however, contribute his labor for the mere joy of showing what he had learned. He knew where he could get good sand and gravel that would be all right after washing and screening. They had taught him the importance of doing this at the school. Old chicken wire and some boards necessary for reinforcements and forms were picked up around the farm.

Was the father surprised? Well, this will indicate some things: "Did they teach you concrete work in the school?" the father asked. "Well, at least, they are putting something into your head that will do you some good. Who is your teacher? I want to meet him and find out what is the best mixture for a floor for my feed lot."

But the boy's father did not have to see the teacher. Johnny was on the spot, and advised that a one-course floor of 1:2:3 mixture would be best. This again surprised the father of the boy. Johnny's father soon began to figure that the work done by the boy pointed out a lot of other improvements that could be made around the farm, with the boy's help, and be made better of concrete than of any other material.

Today the school tendency is to impart practical knowledge along with theory; that is, to show the practical application of theory, also to give the student the ground work of useful arts and sciences. At the present time, many schools are conducting elementary courses in concrete construction. One of the advantages of manual training in concrete is that it still keeps the boy in carpentry work, in building forms for concrete exercises.

To the school, an advantage of taking up this kind of manual training is that but few tools and equipment, other than what is used in the manual training work, are necessary; and most of what is needed can be made by the boys at little or no expense to the school. The materials also are inexpensive and easy to obtain. Aside from the sand, two or three water buckets, a wheel-barrow with a metal bottom, several square nosed shovels and a screen for separating sand and gravel, all of the equipment needed can be turned out in connection with the manual training studies in carpentry.

When we stop to consider how the interest and activities of thousands of boys in Iowa may thus be turned to the practical uses of concrete on the farm we begin to understand how this material will transform the sanitary condition on every farm in the state.

If we turn the youth of today in the useful arts and sciences,—develop constructive ability—who knows but that some of our engineers in concrete construction, for the next generation, can say: "My first inspiration came from the vocational work I did in concrete while in the public schools of Iowa."

THE GYPSUM INDUSTRY OF IOWA.

John Ebersole, Fort Dodge, Iowa, High School.

Among the nations of the world, the United States stands second in the gypsum industry, and the region around Fort Dodge, Iowa, ranks third among the largest gypsum centers in the United States. Other fields of gypsum are located in New York State; Grand Rapids, Michigan, Kansas, South Dakota, and Ohio.

The gypsum found near Fort Dodge is almost pure. The average thickness of the vein is between nine and ten feet. The yield per acre of gypsum suitable for plaster is thirty thousand tons.

The first gypsum mill in Fort Dodge was erected in 1872 at a place called Gypsum Hollow. The founders were Captain George Ringland, Webb Vincent and S. Meservey. At this time gypsum was used only for making finishing plasters. In 1895 the Cardiff Mill, representing Fort Dodge capital, began operation. This was the first of the mills to be built on the prairie, and it was later destroyed by fire. The success of this mill encouraged the construction of many others, so that by 1900 several new mills were in operation.

At the present time there are five gypsum mills located near Fort Dodge and in Webster county. The total number of men employed by the five companies is about one thousand. The combined output of these five mills is about seventy-five carloads per day. This material is shipped to contractors in almost every state in the Union.

The process of preparing gypsum is greatly simplified from what it used to be, because of the numerous machines which have lately been invented for this work. An example of these is seen in the electric drills and cars which are used in the mine. Most of the gypsum now used is being mined and very little quarrying is being done. The gypsum is taken from the walls of the mine by dynamiting. This dynamiting is done about four o'clock in the morning by men who have had much experience in this line so that the danger is reduced to a minimum.

After the gypsum has been taken from the walls of the mine, it is loaded on cars, some of which have a capacity of twenty-two hundred pounds. These cars are drawn out by an electric engine to the crusher where the ore is reduced to pieces about the size of base balls. It is then automatically loaded on to cars and taken to the mill where it is dumped into the store room. In some cases the mill is about two miles from the mine.

The first process at the mill takes place in the crusher where it is again reduced, this time to pieces about the size of walnuts. It is then taken through the drying tube, because all gypsum, when taken from the mine, contains about twenty per cent of moisture which must be taken out before the gypsum can be used. While it is in the drying tube, all pieces of iron and similar deposits which might be mixed with the gypsum, are removed by a large magnet.

It is now taken to the pulverizer where it is made as fine as salt. The gypsum is now known as land plaster, which is used as a fertilizer. The last process occurs when it is put into huge vats and subjected to intense heat, which take every bit of moisture out of it. The gypsum is known as calcined gypsum or as it is more widely known, stucco.

At the mills the calcined gypsum is mixed with retarder for the convenience of the users. Seven pounds of retarder and one and one-half pounds of hair are added to each ton of calcined gypsum. The retarder used by the Fort Dodge mills is made by a secret process.

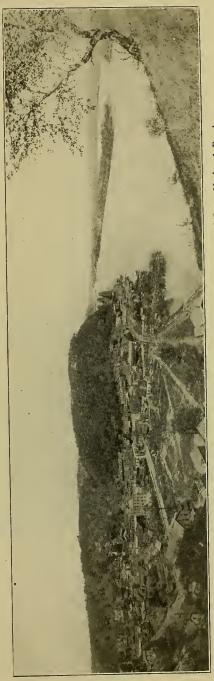
Among the productions of gypsum are hard wall plasters, which contain the retarder and hair, and which are used on interior walls. It leaves the mill in sacks and is shipped to contractors the country over.

Calcined plaster is calcined gypsum containing no retarder or hair. Large quantities of this plaster are used by glass factories the world over. When calcined gypsum is ground very fine, it is known as plaster of Paris, which is used in many of the arts. This fine calcined gypsum is also mixed with Paris green and used for an insect poison. It prevents the poison from being washed off and adds to its effectiveness

Much gypsum is also used in making imitation marble. Uncalcined gypsum has long been recognized as a fertilizer of considerable and remarkable merit. Other products of gypsum are plaster board used for partitions; gypsum blocks used for partitions, and buildings; gypsum roofing blocks, used as fire-proof roofings, and stucco which is used in the interior decorations of buildings. Gypsum is also used to a great extent in the manufacture of paints.

Deposits of gypsum are restricted to very limited and widely scattered areas. The great thickness of the gypsum in Webster county, together with its extent and purity, makes the supply here practically inexhaustible. Since the finished product is heavy, cost of shipment will always be a large factor in determining the portion of the country that can be reached by any production of gypsum.

With the exception of a small amount at Centerville, there is no gypsum in Iowa except in Webster county so that competition from other points in the state is impossible.



McGregor, "The Switzerland of America," the site of the Proposed Iowa National Park.

With the growing population of the United States, the demand for cypsum is increasing rapidly and it is becoming known as one of our most valued products.

SCENIC IOWA.

THE PROPOSED NATIONAL PARK NEAR MCGREGOR, IOWA.

This territory comprises the famous picturesque features of Pike's Peak and the Pictured Rocks.

For over two hundred years, these majestic heights have watched the growth and development of the valleys and are now coming into their own.

From Pike's Peak, after reaching the summit, is a scene rarely witnessed in any land beneath the sun. The mighty Mississippi lies more than 400 feet below, sweeping on with all its majesty toward the Gulf of Mexico. Looking up the stream the river appears like a chain of bright islands and lakes, extending as far as the eye can reach. The islands are hemmed in by pond lilies and covered with verdure. Winding among these islands or dividing itself off into different channels, sweeps the great waterway, calmly and majestically, as it has been doing for thousands of years.

To the right and left of the Peak are other forest clad bluffs, nearly as high as this one. Opposite to these heights, and five miles away as the crow flies, stands the Wisconsin wall of the river, with steep and picturesque bluffs. But the climax of Nature's handiwork, the grandeur of it all, lies on the Iowa side in the vicinity of McGregor.

Around, above the walls winds the well-beaten trail up through the oak woods past a miniature Minnehaha to the top of Pike's Peak, the first land in the northwest seen by white men. Stand there and as you drink in the scene of amazing loveliness let the picture of that discovery day of long ago grip the imagination.

It has as good a right to the name of Pike's Peak as Colorado's famous mountain; in fact, its claim is a prior one for on a summer's day in 1805 the explorer, General Pike, shelved his boat on the pebbly shore at the foot of the hill, climbed to its top and there placed the first American flag ever raised over the northwest territory.

Persons who have traveled the world over and have seen the Rhine, the Danube, the Rhone, the Po, the Tiber, the Hudson and many other noted rivers, say that one hundred miles along the upper Mississippi is equal to any of them; in fact, from Dubuque to St. Paul is a mar-

velous panorama of loveliness, with the climax at the mouth of the Wisconsin and in the vicinity of McGregor.

The many little towns hidden among the high green bluffs of the Mississippi are just as picturesque as any of the river towns in Germany or Austria. True, no grim castles crown the heights where barons in the ages past slew and oppressed their fellow men, but one can see as glorious lands and as happy homes, and farms as rich as any in France. Here is where the first white man's foot touched Iowa soil, and here the first American flag waved over the Louisiana purchase. Some say there is no history. The whole region abounds with romance as interesting as any on the globe. A monument is even now being erected to the everlasting memory of Marquette and Joliet, in the magnificent park on the Wisconsin side of the river. It is but fitting that there should be a magnificent park on the Iowa side.



The proposed Iowa National Park View from the Wisconsin side.

Because of the remarkable number of prehistoric mounds on the hills if for no other reason Professor Pheeba, a member of the London Archaeological society, believes the region should be preserved from commercialism. The scientists at one time made a careful investigation of the effigy and burial mounds on both the Iowa and Wisconsin sides of the river about Pike's Peak and expressed wonder that the American

government had taken no steps to preserve these tumuli. He spoke of them as the most valuable group of mounds in existence to his knowledge.

Of Pictured Rocks, Professor Trowbridge of the geology department of the Iowa university said: "It is undoubtedly the most picturesque spot on the river." The formation is a bit of Yosemite valley and the Grand canon dropped down among the Mississippi hills. Solid cliffs 200 feet high of colored sandstone varying from shining ivory white to the most brilliant orange and scarlet, enclose an amphitheater through which a clear stream splashes in a series of waterfalls. The sands of more than forty different colors lie in horizontal, curved, zigzag and a variety of fantastic lines one above the other making the whole a piece of natural sand mosaic of enchanting beauty.

And yet the fiftieth or hundredth part has not been told. History? The whole region is full of it. For this was the route followed by the pioneers in early days who were laying the foundations of the northwest.

Considering the wealth of scenic beauty and historic association in the park region, it is little wonder that steps are now being taken to reserve large tracts of land in this section as an everlasting monument to the people of the nation.

SPIRIT LAKE AND THE OKOBOJIS.

It is little wonder that "the present residents, the pioneers and the pre-pioneers," look upon this elevated Lake Region as a natural "Resting Place" (the Indian word for Okoboji) and would have it preserved through the centuries by the State of Iowa. To those who traversed the undulating prairie lands of Indiana, Illinois and Iowa, through the long, dreary days of early pioneer life, it must have been nothing short of a scenic revelation, when they stood on the eastern elevation of this section and beheld the panorama of Nature's radiant beauty spread out before them. Those who were footsore must have forgotten the pain; the ones who had been the sentinels through the long vigils of many a lonely night were certainly re-awakened, and those who had lost all hope of ever coming to what might once more be called home, were fully rewarded, when their eves feasted upon fertile hills and verdant valleys. The fuel for the campfire was just at hand; the timber for the home was on every side; game of water and field was abundant and every material want was easily supplied.

Spirit Lake,—Minne-Waukon, and the Lakes of the Okobojis, comprise the so-called Lake Region of Northwestern Iowa. The former embraces an area of about 12 square miles. It has a romantic and somewhat legendary history. The original redmen of this section had had enough dealing with the Sioux, the Tigers of the Plains, to believe that

⁻PAGE ONE HUNDRED FORTY-TWO





safety was the better part of valor when dealing with their fierce opponents.

To the spirits that carried one of their beautiful maidens into a fairy habitation of oblivion, beneath the restless waters of the lake, thereby escaping the pursuing Sioux, they ever paid a singular homage. While no Indian ever thought of canoeing on the Upper Lake, except along the shores, he took an extravagant delight in searching out every nook and inlet of the Okobojis; and his war paint was never brighter, neither were his chanted war cries more fierce than when fighting for them.

The 35 miles of shoreline of Lake Okoboji are today set with native trees of oak, ash, elm and hickory. The waters of these lakes lap at the fringes of grassy plats that stretch away into hillsides tufted with blue grass and white clover. The hills which may have echoed back the war cry of half naked savages, are today marked with beautifully designed cottages, singly and in colonies, and artistically planned bungalows.

The colony groups at Arnold's Park, Steven's beach, Des Moines beach, Omaha beach, Manhattan Inn, Pillsbury's Point, Gilley's beach and Miller's Bay on Lake Okoboji and the Orleans Hotel, Crandall's Lodge and Knight Templar Park at Spirit Lake are spots of rare beauty, where thousands of tired travelers find joyous occasions to refresh and re-create the old-time energy.



In front of the Macbride Laboratory at Lake Okoboji.



View of the Macbride Laboratory at Lake Okoboji.



The boulder liner shore near the Macbride Laboratory at Lake Okoboji.

It is here that one may find opportunity for scientific study and research, if he cares to avail himself of the Macbride Lakeside Laboratory at Lake Okoboji. Here we find a scientific station, including laboratory building, with lecture halls, a cottage of ample size, boat houses, tents, and a full equipment for those who would do careful and painstaking work in either botany, geology or zoology, from the view point of general field work.

The wild game and the Indian hunter are gone; no sentinel stands on guard; the spirits of the noble waters are no longer to be feared; the only contenders for the future development of this sublime beauty spot are the scientific mind and the artistic hand of loyal Iowans.

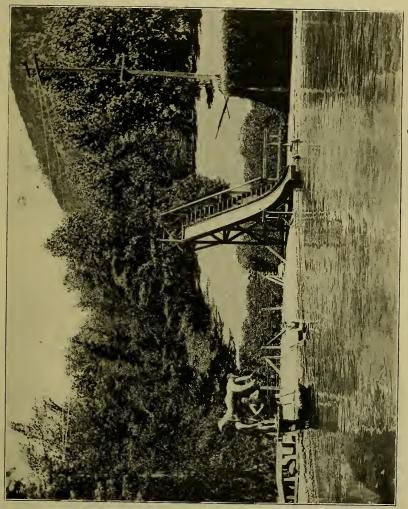
Would you enjoy a season of unalloyed pleasure? After a day in the woods or along the gravelly beaches of these lakes, take a spirited boat trip in canoe or rowboat, on a motor launch or "The Queen" and finish with an enthusiastic plunge in the deeper waters of these lakes. When this program has been carried out, you can lie down to a sleep fit for the gods, and only the cheery call of the alto-noted robin or the less romantic call of a hungry stomach will ever awaken the sleeper.

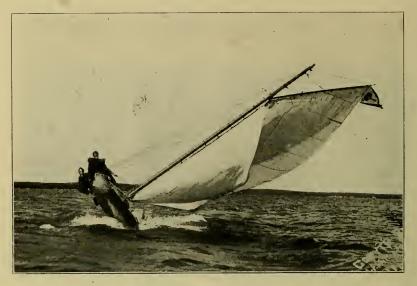


Motor boat racing at Lake Okoboji.

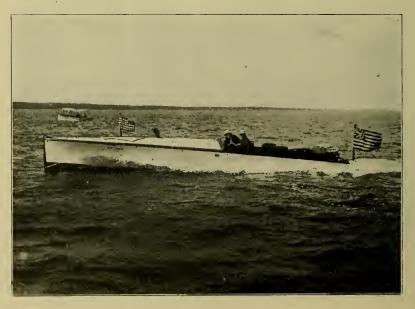
Silent, yet speaking, stand the monumental sentinels on the wooded elevations to the south of Arnold's Park at Lake Okoboji, constantly reminding us of the wild assaults and desperate encounters that once held sway, where now is unending joy and beauty.

These Lake resorts are reached by the Chicago, Milwaukee & St. Paul and the Chicago, Rock Island railroads.





On edge at Lake Okoboji.



Boating at Lake Okoboji.



In the Teeth of the Wind at Lake Okoboji.



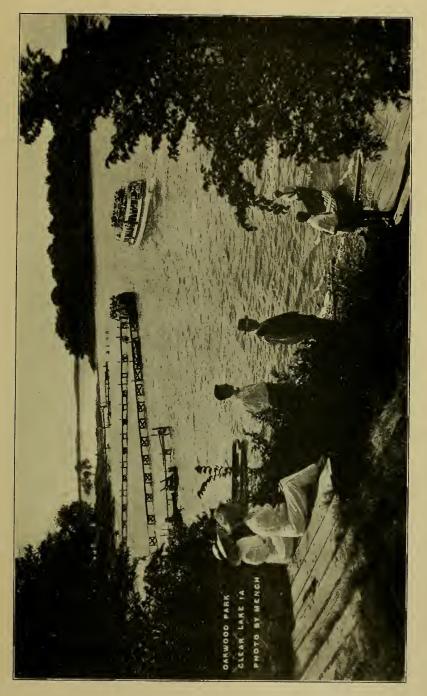
The "Francis Racer" at Lake Okoboji.



Making the Curve at Lake Okoboji.



In front of the Lakeside Store at Arnold's Park at Lake Okoboji.



-- PAGE ONE HUNDRED FIFTY-ONE



In front of the Oak Park Hotel at Clear Lake.

Among the inland fresh water lakes of the United States, there are few that can compare with those of Northern Iowa. Of the several lakes the one located about ten miles to the west of Mason City, and known as Clear Lake, is an excellent example of clear, fresh water. This lake is from one to three miles wide and seven miles in length. It has a very beautiful shoreline, about eighteen miles of which is well wooded with sturdy Black Walnut and giant Burr Oak trees.

In the springtime Clear Lake has a direct call to every Ike Walton; for 'tis here that the ravenous pickerel, the gamey pike and the more adroit black bass are to be sought after and caught, if skill is not wanting. During the summer season, the 500 cottages and three spacious hostelries, house and care for thousands of visitors and tourists who delight to spend a few weeks at this point. Along many of the sandy beaches of Clear Lake are the finest bathing spots in the world. The bathing sites are safe, attractive and sufficient in extent to permit every gratification of the seaside resorter. Every variety of water boating in the summer season and ice boating in winter time is indulged in at Clear Lake.



Summer Cottage at Clear Lake.

From the Northcliffe booklet we glean these attractive lines: "From the first day of September until the lake freezes in December, the cry of the wild duck and brant, and the honk of the wild goose thrill the heart of the huntsman and call to the sport of kings. Snipe, plover, quail, prairie chicken, rabbit and squirrel abound in the fields and woods in this vicinity and test the eye, nerve and skill of the hunter and furnish him meat for his table so delicious, so tender and toothsome, it fairly melts in your mouth, when served with grape jelly, mashed potatoes and hot coffee."

The city of Clear Lake is situated on the east shores of the lake. It has a population of 2700 normally, but in the summer months this is increased to 5000 or more. The railroad connections and Interurban service can not be excelled; the Lake itself is an invitation to all travelers; the people are courteous and every visitor is given a joyous welcome.

Clear Lake is reached direct by the Chicago, Milwaukee & St. Paul Railroad

PILOT KNOB.

ONE OF IOWA'S BEAUTY SPOTS.

Eugene Secor

When the giant plow of one of the great ice sheets of geologic times left its tell-tale furrows on the map of northern Iowa numerous interesting formations were created which have become the beauty spots of the state.

Wood-bordered lakes, picturesque hills, fertile plains and winding rivers are the heritage of beauty left by the so-called Wisconsin drift that brought from the north its largess of boulder clay and gravel.

The western moraine of that glacial movement is in the region of Spirit Lake and Okoboji. The marginal debris was so deftly piled that the charming lakes are the joy of the sportsman and delight of the summer pleasure seeker.

But what of the eastern border of that same titanic drag that smoothed the prairies of fourteen Iowa counties and left the foundation of a soil unsurpassed in fertility and ease of culture?

Near the boundary lines that separate Worth and Cerro Gordo counties from Winnebago and Hancock is a range of low irregular hills zigzaging their uneven prominences from the southern boundary line of Minnesota southward which mark the eastern geologic boundary of the Wisconsin drift in Iowa. Clear Lake was then confined to the present boundaries.

In the old, old times Clear Lake may have been an inland sea with its outlet into the Iowa river. The range of hills west of the present lake may have dammed the water and forced an outlet toward the Cedar.

But the spot that is dear to my heart is near the intersection of the boundary lines of the four counties mentioned, but solely in Hancock county, about five miles east of Forest City. At this point the hills are more prominent. The one that shows its bald head above all its brethren was named by the government surveyors as Pilot Knob. Its altitude is only about 1,500 feet, not the highest point in Iowa, but offering a panoramic view from its summit that makes a lover of Iowa proud of the countless arable acres spread out before him in every direction. To stand on the top of the richest agricultural region on earth and behold more fertile fields which industry has checkered with growing crops than is possible anywhere else on this planet is to thrill the soul with the greatness and beauty of our commonwealth.



One View of Pilot Knob.

A million arable acres is not a common sight. From the top of Pike's Peak one can see farther but what does one see but naked mountains on one side and arid lands on the other? Not so from Pilot Knob. As far as the eye can reach, multiplied by the power of a good glass, is

one vast expanse of fertility dotted with native groves pleasant to the sight, farm buildings that denote comfort and prosperity, cattle grazing in luxuriant pastures, and fields of varying colors according to the season and the crops grown.

And when the artist, October, has painted the woods with kaleidoscopic beauty; when the scarlet oak blushes to the top and the wild cherry dresses in yellow and green as for Hallowe'en; when the sumac burns like a beacon fire and the maples try to imitate a golden sunset; when the Virginia creeper looks like burnished copper and the changing tints of autumn make all the landscape glorious with color, then the view from Pilot Knob makes one feel as if he were in fairyland.

From this point can be seen eight railroad stations and the winding valley of Lime creek for nearly twenty miles. The valley and region contiguous is gemmed with groves of timber native to this part of the state, and the prairie is dotted with planted shelter-belts, making the whole look like the garden of the Lord for beauty.

Within eighty rods of the knob is a grove of white oaks, the only considerable number of that variety in this part of Iowa so far as I know. And a few miles to the north are a few sugar maples, trees very uncommon on the Wisconsin drift.



Pilot Rock, Cherokee County. The largest boulder in Iowa.

About half a mile southwest of the knob is a body of water covering two or three acres, called Dead Man's lake, bordered with low growing timber, where the vireo sings and nests in sacred solitude. In that lake are three kinds of water lilies, one of which is not known to exist anywhere else in Iowa. How it got there is an interesting speculation. Of Dead Man's lake there is a legend of treachery and tragedy—but that's another story.

A long time ago I dreamed of the time when this natural park and outlook should be controlled by the state and preserved from defacement by the ax, the goat and the plow. I wonder if my dream will ever come true?—Register and Leader.

THE DECORAH ICE CAVE.

The Decorah Ice Cave, located in the face of the bluff, on the north side of the river opposite Decorah, is the most interesting of the many caverns which the Galena limestone contains. The walls of this cave, dry and bare in the autumn and early winter, are coated, during the spring and early summer, with a layer of ice.

The cave is merely one opening into a vast net-work of fissures; penetrating the underlying rock-layers for miles around. In the fall, as the air cools and contracts in volume, it enters the cave, from which it emerges as a cool draught when the sun's warmth again penetrates the rock-layers. At the mouth of the cave, where the expansion is the most rapid, ice forms on the north wall. The cold, then, is merely the stored up cold of the former winter.

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TRIBUTE TO IOWA

Dr. Frank Crane.

"If congress should offer me my choice of any state in the Union, as a reward for my worth and modesty, I should say, unhesitatingly, 'Give me Iowa.' Because Iowa is the most American state in the nation. There are few millionaires, few paupers. No scum to speak of. They are just plain United States folks.

Iowa buys more first class reading matter than any other state except New York. Every ten miles or so in Iowa there is a Chautauqua in the summer time, and where you find Chautauquas you find the people of the Western World at their best.

If any foreigner wants to see what a real, genuine, dyed-in-the-wool United Stateser is, let him attend a Chautauqua.

Iowa is the new New England. New England is not New England any more. It is swamped, diluted and washed out by immigrants.

There is about as much of the old Mayflower stock left in Massachusetts as there is old Colonial furniture in Nantucket. Boston is Irish; Worcester is Swedish, and Lowell is a little of everything. Iowa is where the New Englanders that had snap have gone to."



Mississippi River Power Co., Keokuk.

IOWA—"BEAUTIFUL LAND"

Tacitus Hussey.

A song for our dear Hawkeye State!

Iowa—"Beautiful Land,"
As a bird sings of love to his mate,

Iowa—"Beautiful Land,"
The land of wide prairies and trees;
Sweet clover and humming of bees,
White breath adds perfume to these,

In Iowa—"Beautiful Land!"

The corn fields of billowy gold,
In Iowa—"Beautiful Land,"
Are smiling with treasure untold,
In Iowa—"Beautiful Land."
The food hope of nations is she,
With love overflowing and free
As her rivers which run to the sea,
In Iowa—"Beautiful Land!"

Her tale of the past has been told,
Of Iowa—"Beautiful Land;"
The future is not yet unrolled,
Of Iowa—"Beautiful Land."
The past! how high on fame's scroll
She has written her dead heroes' roll!
The future! fear not for thy goal,
Iowa—"Beautiful Land!"

Then sing to the praise of our God,
Of Iowa—"Beautiful Land,"
And our fathers whose feet early trod
This Iowa—"Beautiful Land!"
A land kissed by sunshine and showers,
Of corn lands, wild rose and flowers—
Oh! thrice blessed land, this of ours!
Our Iowa—"Beautiful Land!"

Chorus.

Crown her! Crown her! Crown her!
Crown her with corn this queen of the west,
Who wears the wild rose on her breast!
The fairest, the richest and best!
Iowa—"Beautiful Land!"
Iowa—"Beautiful Land!"

SUGGESTIVE PROGRAM.

FOR

THE OBSERVANCE OF IOWA DAY IN RURAL COMMUNITIES.

PROGRAM.

Song, "Iowa"School Chorus
Essay, "The Iowa Pioneer"Pupil
Composition, "Iowa's Place Among the Sister States"Pupil
Recitation, (Select from Iowa authors)Pupil
Essay, "Seeing the Beauty Spots of Iowa First"Pupil
Composition, "Iowa and Her Schools"Pupil
Recitation, (Select from Iowa authors)Pupil
Composition, "The Resources of Iowa"Pupil
Address, (Limited to fifteen minutes)
Song, "America"General Assembly

While the above is only suggestive, it is thought to embody the main features of an Iowa Day program. Let the program be carried out with promptness. The exercises should not be long continued. See to it that those who are to participate in the Athletic events do not begin to carry out their particular part of the day's exercises until all appointments are ready. Insist upon a close observance of the entire program. This will require some skill in the handling of general exercises, but the teacher should have ability in these things; and, she is the one who should take the initiative in the proper observance of a real Iowa Day celebration.



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